

=> fil reg  
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STRUCTURE FILE UPDATES: 11 AUG 2009 HIGHEST RN 1173975-63-7  
 DICTIONARY FILE UPDATES: 11 AUG 2009 HIGHEST RN 1173975-63-7

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TSCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

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 predicted properties as well as tags indicating availability of  
 experimental property data in the original document. For information  
 on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> d que 127

L4	853672	SEA FILE=REGISTRY SPE=ON	ABB=ON	PLU=ON	(SI(L)C(L)O)/ELS
L5	431569	SEA FILE=REGISTRY SPE=ON	ABB=ON	PLU=ON	EPOX?/CNS
L6	7715	SEA FILE=REGISTRY SPE=ON	ABB=ON	PLU=ON	L4 AND L5
L7	2179	SEA FILE=REGISTRY SPE=ON	ABB=ON	PLU=ON	L6 AND 2-100/SI
L8	1365	SEA FILE=HCAPLUS SPE=ON	ABB=ON	PLU=ON	L7
L9	2	SEA FILE=HCAPLUS SPE=ON	ABB=ON	PLU=ON	L8 AND BATTER?
L10		QUE SPE=ON ABB=ON PLU=ON			PHOTORX## OR PHOTOREACT? OR PHOTOSENS? OR PHOTOPOLYM? OR PHOTOCUR? OR PHOTOHARDEN? OR PHOTOCROSS? OR PHOTOCAT?
L11		QUE SPE=ON ABB=ON PLU=ON			(PHOTO OR LIGHT OR PHOTOLY? OR ULTRAVIOLET? OR ULTRA (W) VIOLET? OR UV# OR SUV OR LUV OR RADIA? OR IRRADIA? OR EMANAT? OR EMIT? OR EMISS? OR L ASER?) (2A) (RX# OR RXN# OR REACT? OR SENSITI? OR POLYM? O R CURE# OR CURING# OR CURAB? OR CROSS(W)LINK? OR CROSSLIN K? OR CAT# OR CATALY?)
L12	156	SEA FILE=HCAPLUS SPE=ON	ABB=ON	PLU=ON	L8 AND (L10 OR L11)
L13	0	SEA FILE=HCAPLUS SPE=ON	ABB=ON	PLU=ON	L12 AND ELECTROCHE M?/SC, SX
L14	0	SEA FILE=HCAPLUS SPE=ON	ABB=ON	PLU=ON	L12 AND ELECTROLYT ?
L15	8	SEA FILE=HCAPLUS SPE=ON	ABB=ON	PLU=ON	L12 AND (ACTINIC IRRADIATION? OR ELECTRON BEAM?)
L17	19	SEA FILE=HCAPLUS SPE=ON	ABB=ON	PLU=ON	L12 AND (CATIONIC OR RADICAL?) (3A) (PHOTOINITIATOR? OR PHOTO INITIATOR?)
L18	28	SEA FILE=HCAPLUS SPE=ON	ABB=ON	PLU=ON	L9 OR L13 OR L14 OR L15 OR L17
L19	22	SEA FILE=HCAPLUS SPE=ON	ABB=ON	PLU=ON	L18 AND (1840-2003 ) /PRY, AY, PY
L21	15771	SEA FILE=HCAPLUS SPE=ON	ABB=ON	PLU=ON	L6
L22	243	SEA FILE=HCAPLUS SPE=ON	ABB=ON	PLU=ON	L21 AND ELECTROLY?

L23 1 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L8 AND ELECTROLY?  
 L24 3 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L22 AND (L10 OR  
 L11)  
 L25 4 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L23 OR L24  
 L26 3 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L25 AND (1840-2003  
 )/PRY,AY,PY  
 L27 25 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L19 OR L26

=> fil hcap

FILE 'HCAPLUS' ENTERED AT 09:09:31 ON 13 AUG 2009

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FILE COVERS 1907 - 13 Aug 2009 VOL 151 ISS 7

FILE LAST UPDATED: 12 Aug 2009 (20090812/ED)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2009

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2009

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2009.

CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

The ALL, BIB, MAX, and STD display formats in the CA/CAPLUS family of databases have been updated to include new citing references information. This enhancement may impact record import into database management software. For additional information, refer to NEWS 9.

=> d l27 1-25 ibib ed abs hitstr hitind

L27 ANSWER 1 OF 25 HCAPLUS COPYRIGHT 2009 ACS ON STN

ACCESSION NUMBER: 2005:698171 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 143:195373

TITLE: Solventless, non-polluting radiation-curable coatings, filled composition, and manufacture of a coated article

INVENTOR(S): Ghoshal, Ramkrishna

PATENT ASSIGNEE(S): Polyset Company, Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 22 pp., Cont.-in-part of

U.S. Ser. No. 636,101.

CODEN: USXXCO

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050170187	A1	20050804	US 2005-79971	20050315
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US 7285579	B2	20071023		
US 20050042458	A1	20050224	US 2003-636101	20030807
			<--	
US 6962948	B2	20051108		
PRIORITY APPLN. INFO.:			US 2003-636101	A2 20030807
			<--	

OTHER SOURCE(S): MARPAT 143:195373

ED Entered STN: 05 Aug 2005

AB Solventless siloxane epoxy-based coating compns. are for use on metals, plastics, wood, and glass. The compns. are cationically curable in air by UV or by electron beam radiation. The siloxane epoxy coating compns. exhibit excellent film properties after curing, such as good adhesion, flexibility, and appearance. The coating compns. may be clear or may contain fillers, dyes, and pigments. Manufacturing a coated metal, plastic, wood, or glass substrate using the compns. is also discussed.

IT 121225-97-6, PC-1000  
(solventless, non-polluting radiation-curable epoxy siloxane coatings containing)

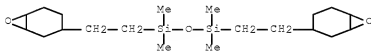
RN 121225-97-6 HCAPLUS

CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]-, homopolymer (CA INDEX NAME)

CM 1

CRN 18724-32-8

CMF C20 H38 O3 Si2



IC ICM B32B027-38

ICS C08L063-00; C08L083-00

INCL 428413000; 428447000; 525476000; 525525000

CC 42-10 (Coatings, Inks, and Related Products)

ST solventless epoxy siloxane radiation curable coating

IT Nitrite rubber, uses  
(carboxy-terminated, Hycar CTBN, flexibilizer; solventless, non-polluting radiation-curable epoxy siloxane coatings containing)

IT Polymerization catalysts  
(cationic; solventless, non-polluting radiation-curable epoxy siloxane coatings containing)

- IT Transparent materials  
(coatings; solventless, non-polluting radiation-curable epoxy siloxane coatings containing)
- IT Polysiloxanes, uses  
(epoxy, cycloaliph.; solventless, non-polluting radiation-curable epoxy siloxane coatings containing)
- IT Phenoxxy resins  
Rubber, uses  
(flexibilizer; solventless, non-polluting radiation-curable epoxy siloxane coatings containing)
- IT Epoxides  
(flexibilizer; solventless, non-polluting radiation-curable epoxy siloxane coatings containing)
- IT Butadiene rubber, uses  
(hydroxy-terminated, epoxidized, Poly bd 605E, flexibilizer; solventless, non-polluting radiation-curable epoxy siloxane coatings containing)
- IT Fatty acids, uses  
(linseed-oil, epoxidized, Me esters, Vikoflex 9010; solventless, non-polluting radiation-curable epoxy siloxane coatings containing)
- IT Epoxy resins, uses  
(polysiloxane-, cycloaliph.; solventless, non-polluting radiation-curable epoxy siloxane coatings containing)
- IT Adhesion promoters  
(solventless, non-polluting radiation-curable epoxy siloxane coatings containing)
- IT Acrylic polymers, uses  
(thermoplastic, flexibilizer; solventless, non-polluting radiation-curable epoxy siloxane coatings containing)
- IT Coating materials  
(transparent; solventless, non-polluting radiation-curable epoxy siloxane coatings containing)
- IT Fats and Glyceridic oils, uses  
(vegetable, epoxidized, esters; solventless, non-polluting radiation-curable epoxy siloxane coatings containing)
- IT Fats and Glyceridic oils, uses  
(vegetable, epoxidized; solventless, non-polluting radiation-curable epoxy siloxane coatings containing)
- IT 3234-28-4  
(Vikolox 14; solventless, non-polluting radiation-curable epoxy siloxane coatings containing)
- IT 9003-17-2D, hydroxy-terminated, epoxidized  
(butadiene rubber, flexibilizer; solventless, non-polluting radiation-curable epoxy siloxane coatings containing)
- IT 142627-97-2, OXT 121  
(flexibilizer; solventless, non-polluting radiation-curable epoxy siloxane coatings containing)
- IT 765-14-0, Dodecyl vinyl ether 1195-92-2, Limonene oxide 2182-55-0, Cyclohexyl vinyl ether 17832-28-9, HBEVE 18934-00-4, OXT 221  
(flexibilizer; solventless, non-polluting radiation-curable epoxy siloxane coatings containing)
- IT 9003-18-3D, carboxy-terminated  
(nitrile rubber, flexibilizer; solventless, non-polluting radiation-curable epoxy siloxane coatings containing)
- IT 71449-78-0 74227-35-3 75482-18-7 89452-37-9 104558-94-3, Cyacure 6974 139301-16-9 408332-53-6 408333-89-1 478035-11-9  
(solventless, non-polluting radiation-curable epoxy siloxane coatings containing)
- IT 25068-38-6, Araldite 6084 25085-98-7, ERL 4221 55798-91-9, Capa

316 121225-97-6, PC-1000 845536-09-6  
(solventless, non-polluting radiation-curable  
epoxy siloxane coatings containing)

IT 2530-83-8, Silane A-187 3388-04-3,  
2-(3,4-Epoxy cyclohexyl)ethyltrimethoxysilane 7440-22-4, Silver, uses  
13463-67-7, Titania, uses 14807-96-6, Nylal 300, uses  
(solventless, non-polluting radiation-curable  
epoxy siloxane coatings containing)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS  
RECORD (1 CITINGS)

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
RE FORMAT

L27 ANSWER 2 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:447118 HCAPLUS Full-text

DOCUMENT NUMBER: 142:484790

TITLE: Photoelectrochemical solar cell

INVENTOR(S): Kolbusch, Thomas; Giessmann, Andreas; Khouri,  
Bruce M.; Stevenson, Edward. J.

PATENT ASSIGNEE(S): Coma Beteiligungsgesellschaft MbH, Germany

SOURCE: Eur. Pat. Appl., 11 pp.  
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1533818	A1	20050525	EP 2003-26229	20031114
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
WO 2005050681	A1	20050602	WO 2004-EP12320	20041030
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RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: EP 2003-26229 A 20031114  
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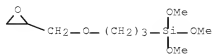
ED Entered STN: 26 May 2005

AB To fabricate a solar cell with increased efficiency and improved long-term stability, a photoelectrochem. solar cell comprises a first and a second electron conducting layers and a photosensitive layer between the first and the second layers and also an electrolyte layer arranged between the photosensitive layer and the second electron conducting layer. The electrolyte layer is formed of solid electrolyte layer.

IT 2530-83-8, 3-Glycidioxypropyltrimethoxysilane  
(photoelectrochem. solar cell)

RN 2530-83-8 HCAPLUS

CN Oxirane, 2-[[3-(trimethoxysilyl)propoxy]methyl]- (CA INDEX NAME)



IC ICM H01G009-00  
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)  
 IT 78-10-4, Teos 2530-83-8,  
 3-Glycidyloxypropyltrimethoxysilane  
 (photoelectrochem. solar cell)  
 REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
 RE FORMAT

L27 ANSWER 3 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2005:283307 HCAPLUS Full-text  
 DOCUMENT NUMBER: 142:322861  
 TITLE: Polymerizable dental composition having a high  
 content of loading material  
 INVENTOR(S): Frances, Jean-Marc  
 PATENT ASSIGNEE(S): Rhodia Chimie, Fr.  
 SOURCE: PCT Int. Appl., 46 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005027857	A1	20050331	WO 2003-FR2649	20030905
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AU 2003278264	A1	20050411	AU 2003-278264	20030905
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EP 1660019	A1	20060531	EP 2003-769573	20030905
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CN 1838934	A	20060927	CN 2003-827156	20030905
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JP 2007515377	T	20070614	JP 2005-509007	20030905
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10/551,712

US 20050059752	A1	20050317	US 2004-933537	20040903
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PRIORITY APPLN. INFO.:			FR 2002-8857	A 20020712
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			WO 2003-FR2649	A 20030905
			<--	
			US 2003-501022P	P 20030909
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OTHER SOURCE(S): MARPAT 142:322861

ED Entered STN: 01 Apr 2005

AB The invention relates to cationic dental compns. that are stable and highly loaded. This dental composition comprises: (1) at least one functionalized silicone ethylene oxide that is reactive cationically and under UV; (2) at least one dental loading material (SiO<sub>2</sub>); (3) a dispersant based on a polyurethane/acrylate copolymer salified by an alkylammonium whose amine index is less than 100 mg of potash per g of dispersant; (4) a cationic photoinitiator (iodonium borate), and; (5) a photosensitizer. These dental compns. can be used for producing dental prostheses and for dental restoration. A dental composition contained a silicone resin obtained by hydrosilylation of vinylcyclohexene epoxide 10, silica 25, ytterbium trifluoride 3, and a photoinitiator 1.25 g.

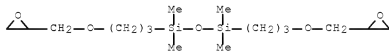
IT 126-80-7 18724-32-8 18758-97-9

65842-29-7

(polymerizable dental composition having high content of loading material)

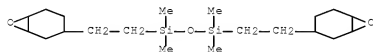
RN 126-80-7 HCAPLUS

CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[3-(2-oxiranylmethoxy)propyl]-  
(CA INDEX NAME)



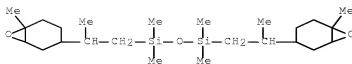
RN 18724-32-8 HCAPLUS

CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]- (CA INDEX NAME)

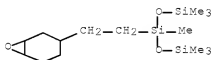


RN 18758-97-9 HCAPLUS

CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(6-methyl-7-oxabicyclo[4.1.0]hept-3-yl)propyl]- (CA INDEX NAME)



RN 65842-29-7 HCAPLUS  
 CN Trisiloxane, 1,1,1,3,5,5,5-heptamethyl-3-[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]- (CA INDEX NAME)



IC ICM A61K006-093  
 CC 63-7 (Pharmaceuticals)  
 Section cross-reference(s): 35, 38  
 IT 126-80-7 18724-32-8 18758-97-9  
 31900-57-9 65842-29-7 131334-81-1 158521-03-0  
 232927-88-7 232927-89-8 337357-54-7 337357-55-8 643030-90-4  
 643030-92-6 812633-47-9, Byk 164  
 (polymerizable dental composition having high content of loading material)  
 OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)  
 REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 4 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2005:160682 HCAPLUS [Full-text](#)  
 DOCUMENT NUMBER: 142:263204  
 TITLE: Solventless, non-polluting radiation containing epoxy siloxanes and thermal curable coatings  
 INVENTOR(S): Ghoshal, Ramkrishna  
 PATENT ASSIGNEE(S): Polyset Company Inc., USA  
 SOURCE: U.S. Pat. Appl. Publ., 37 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 20050042458	A1	20050224	US 2003-636101	20030807
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US 6962948	B2	20051108		
AU 2004264507	A1	20050224	AU 2004-264507	20040805
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WO 2005017057	A1	20050224	WO 2004-US25176	20040805
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RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1651731 A1 20060503 EP 2004-780077 20040805  
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EP 1651731 B1 20061122  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK  
 AT 346124 T 20061215 AT 2004-780077 20040805  
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US 20050170187 A1 20050804 US 2005-79971 20050315  
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US 7285579 B2 20071023  
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PRIORITY APPLN. INFO.: US 2003-636101 A 20030807  
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 WO 2004-US25176 W 20040805

OTHER SOURCE(S): MARPAT 142:263204

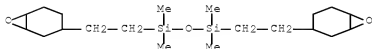
ED Entered STN: 25 Feb 2005

AB Solventless siloxane epoxy-based coating compns. for use on metals, plastics, wood, and glass are disclosed. The compns. are cationically curable in air by heat or by electron beam radiation. The siloxane epoxy coating compns. exhibit excellent film properties after curing, such as good adhesion, flexibility, weatherability, and corrosion resistance even in the absence of a chromium-containing filler. The coating compns. may be clear or may contain fillers and/or pigments. A method for manufacturing a coated metal, plastic, wood, or glass substrate using the compns. is also disclosed, as well as the coated material manufactured by the method.

IT 18724-32-8  
 (solventless, non-polluting epoxy siloxane radiation and thermal curable coatings)

RN 18724-32-8 HCAPLUS

CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]- (CA INDEX NAME)



IC ICM B32B027-38

ICS C08L063-00; C08L083-00

INCL 428417000; 428418000; 428429000; 428450000; 428452000; 525476000; 525477000; 525525000

CC 42-9 (Coatings, Inks, and Related Products)

ST solventless epoxy siloxane radiation thermal curable coating

- IT Polymerization catalysts  
(cationic; solventless, non-polluting epoxy siloxane radiation and thermal curable coatings)
- IT Transparent materials  
(coatings; solventless, non-polluting epoxy siloxane radiation and thermal curable coatings)
- IT Polysiloxanes, uses  
(epoxy, cycloaliph.; solventless, non-polluting epoxy siloxane radiation and thermal curable coatings)
- IT Phenoxo resins  
Rubber, uses  
(flexibilizer; solventless, non-polluting epoxy siloxane radiation and thermal curable coatings)
- IT Epoxides  
(flexibilizer; solventless, non-polluting epoxy siloxane radiation and thermal curable coatings)
- IT Fatty acids, uses  
(linseed-oil, epoxidized, Me esters; solventless, non-polluting epoxy siloxane radiation and thermal curable coatings)
- IT Epoxy resins, uses  
(polysiloxane-, cycloaliph.; solventless, non-polluting epoxy siloxane radiation and thermal curable coatings)
- IT Adhesion promoters  
(solventless, non-polluting epoxy siloxane radiation and thermal curable coatings)
- IT Acrylic polymers, uses  
(thermoplastic, flexibilizer; solventless, non-polluting epoxy siloxane radiation and thermal curable coatings)
- IT Coating materials  
(transparent; solventless, non-polluting epoxy siloxane radiation and thermal curable coatings)
- IT Fats and Glyceridic oils, uses  
(vegetable, epoxidized, esters; solventless, non-polluting epoxy siloxane radiation and thermal curable coatings)
- IT Fats and Glyceridic oils, uses  
(vegetable, epoxidized; solventless, non-polluting epoxy siloxane radiation and thermal curable coatings)
- IT 2530-83-8, 3-Glycidyloxypropyltrimethoxysilane 3388-04-3,  
2-(3,4-Epoxy cyclohexyl)-ethyl trimethoxysilane  
(adhesion promoter; solventless, non-polluting epoxy siloxane radiation and thermal curable coatings)
- IT 2386-87-0, 3,4-Epoxy cyclohexylmethyl-3',4'-epoxy cyclohexane  
carboxylate 83996-66-1, Bis(3,4-epoxy cyclohexyl)adipate  
(carrier medium; solventless, non-polluting epoxy siloxane radiation and thermal curable coatings)
- IT 139301-16-9 408332-53-6 408333-89-1 478035-11-9  
(cationic polymerization initiator; solventless, non-polluting epoxy siloxane radiation and thermal curable coatings)
- IT 1675-54-3  
(flexibilizer; solventless, non-polluting epoxy siloxane radiation and thermal curable coatings)
- IT 1195-92-2, Limonene oxide  
(flexibilizer; solventless, non-polluting epoxy siloxane radiation and thermal curable coatings)
- IT 25068-38-6, Araldite 6097

(solventless, non-polluting epoxy siloxane radiation and thermal curable coatings)  
 IT 18724-32-8 25085-98-7, ERL 4221 37757-92-9 845536-09-6  
 (solventless, non-polluting epoxy siloxane radiation and thermal curable coatings)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)  
 REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 5 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2004:40958 HCAPLUS Full-text  
 DOCUMENT NUMBER: 140:117449  
 TITLE: Cationically crosslinkable and highly filled dental cement compositions  
 INVENTOR(S): Frances, Jean Marc  
 PATENT ASSIGNEE(S): Rhodia Chimie, Fr.  
 SOURCE: Fr. Demande, 42 pp.  
 CODEN: FRXXBL  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2842098	A1	20040116	FR 2002-8857	20020712
			<--	
FR 2842098	B1	20051209		
US 20050059752	A1	20050317	US 2004-933537	20040903
			<--	
PRIORITY APPLN. INFO.:			FR 2002-8857	A 20020712
			<--	
			WO 2003-FR2649	A 20030905
			<--	
			US 2003-501022P	P 20030909
			<--	

OTHER SOURCE(S): MARPAT 140:117449

ED Entered STN: 18 Jan 2004

AB The comps. useful for dentures and dental restoration comprise (1) a reactive silicone compound bearing cationically and UV- crosslinkable oxiranyl groups, (2) ≥1 dental filler (SiO<sub>2</sub>), (3) a dispersant based on polyurethane-acrylate copolymer neutralized with an alkylammonium with an amine number of <100 mg-KOH/g, (4) a cationic photoinitiator, and (5) a photosensitizer.

IT 121225-97-6F, 1,3-Di[2-(3,4-epoxycyclohexylethyl)]-1,1,3,3-tetramethyldisiloxane homopolymer  
 (manufacture of cationically crosslinkable and highly filled dental cement comps.)

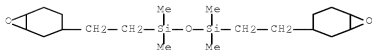
RN 121225-97-6 HCAPLUS

CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]-, homopolymer (CA INDEX NAME)

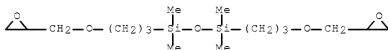
CM 1

CRN 18724-32-8

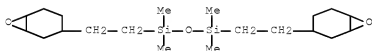
CMF C20 H38 O3 Si2



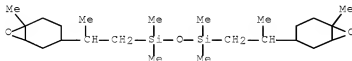
- IT 126-80-7, 1,3-Di(3-glycidoxypropyl)-1,1,3,3-Tetramethyldisiloxane 18724-32-8,  
1,3-Di[2-(3,4-Epoxycyclohexyl)ethyl]-1,1,3,3-tetramethyldisiloxane  
18758-97-9, 1,3-Bis(1,2-epoxy-p-menth-9-yl)-1,1,3,3-tetramethyldisiloxane 65842-29-7,  
3-[2-(3,4-Epoxycyclohexyl)ethyl]-1,1,1,3,5,5,5-heptamethyltrisiloxane  
(manufacture of cationically crosslinkable and highly filled dental cement comps.)  
RN 126-80-7 HCAPLUS  
CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[3-(2-oxiranylethoxy)propyl]-  
(CA INDEX NAME)



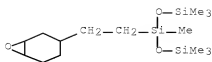
- RN 18724-32-8 HCAPLUS  
CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]-  
(CA INDEX NAME)



- RN 18758-97-9 HCAPLUS  
CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(6-methyl-7-oxabicyclo[4.1.0]hept-3-yl)propyl]-  
(CA INDEX NAME)



- RN 65842-29-7 HCAPLUS  
CN Trisiloxane, 1,1,1,3,5,5,5-heptamethyl-3-[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]-  
(CA INDEX NAME)

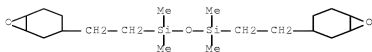


- IC ICM A61K006-09  
ICS A61K006-093
- CC 63-7 (Pharmaceuticals)
- ST silicone oxirane functionalized dental cement cationic photocurable; polyurethane acrylate alkylammonium salt dispersant dental cement; silica filler dental cement; iodonium borate cationic photoinitiator photosensitizer dental cement
- IT 121225-97-6P, 1,3-Di[2-(3,4-epoxycyclohexylethyl)]-1,1,3,3-tetramethyldisiloxane homopolymer  
(manufacture of cationically crosslinkable and highly filled dental cement compns.)
- IT 126-80-7, 1,3-Di(3-glycidoxypropyl)-1,1,3,3-Tetramethyldisiloxane 9016-00-6D, Dimethylsilanediol homopolymer, sru, cationically crosslinkable group-terminated 18724-32-8, 1,3-Di[2-(3,4-Epoxycyclohexyl)ethyl]-1,1,3,3-tetramethyldisiloxane 18758-97-9, 1,3-Bis(1,2-epoxy-p-menth-9-yl)-1,1,3,3-tetramethyldisiloxane 31900-57-9D, Dimethylsilanediol homopolymer, cationically crosslinkable group-terminated 65842-29-7, 3-[2-(3,4-Epoxycyclohexyl)ethyl]-1,1,3,5,5,5-heptamethyltrisiloxane 131334-81-1 232927-88-7D, trimethylsilyl-terminated 232927-89-8 337357-54-7 337357-55-8 643030-90-4 643030-92-6D, trimethylsilyl-terminated  
(manufacture of cationically crosslinkable and highly filled dental cement compns.)
- IT 84-51-5, 2-Ethylanthraquinone 84-54-8, 2-Methylanthraquinone 93-91-4, Benzoylacetone 94-02-0, Ethyl benzoylacetate 94-36-0, Dibenzoyl peroxide, uses 100-52-7, Benzaldehyde, uses 117-10-2, 1,8-Dihydroxyanthraquinone 119-52-8, 4,4'-Dimethylbenzoin 119-53-9, Benzoin 5495-84-1, 2-Isopropylthioxanthone 7473-98-5, 2-Hydroxy-2-methylpropionophenone 24650-42-8, 2,2-Dimethoxy-2-phenylacetophenone 75980-60-8 82799-44-8, 2,4-Diethylthioxanthone 83846-86-0, 4-Isopropylthioxanthone 84434-11-7 142770-42-1, Speedcure CPTX 220183-80-2, 4-(2-Hydroxyethoxy)phenyl (2-hydroxy-2-methylpropyl) ketone (photosensitizer; manufacture of cationically crosslinkable and highly filled dental cement compns.)
- IT 646042-10-6, Solsperser 36000  
(photosensitizers; manufacture of cationically crosslinkable and highly filled dental cement compns.)
- REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 6 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2003:737802 HCAPLUS [Full-text](#)  
DOCUMENT NUMBER: 139:246329  
TITLE: Accelerators for cationic photopolymerization  
INVENTOR(S): Crivello, James V.  
PATENT ASSIGNEE(S): Rensselaer Polytechnic Institute, USA

SOURCE: PCT Int. Appl., 50 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003076491	A1	20030918	WO 2003-US7227	20030310
<--				
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2477135	A1	20030918	CA 2003-2477135	20030310
<--				
US 20030176519	A1	20030918	US 2003-384946	20030310
<--				
US 6863701	B2	20050308		
AU 2003218051	A1	20030922	AU 2003-218051	20030310
<--				
EP 1483310	A1	20041208	EP 2003-714031	20030310
<--				
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK JP 2005520007 T 20050707 JP 2003-574705 20030310				
<--				
PRIORITY APPLN. INFO.:			US 2002-362680P	P 20020308
<--				
			WO 2003-US7227	W 20030310
<--				
OTHER SOURCE(S): MARPAT 139:246329				
ED	Entered STN: 19 Sep 2003			
AB	Comps. that can be photopolymd. by a cationic initiator at an accelerated rate include at least one epoxy monomer, at least one cationic photoinitiator, and a photosensitizer/accelerator. The accelerator is a phenolic resole, or a compound having a structure according to the formula R1(CR2R3OH)n, wherein R1 = Ph, polycyclic aryl, and polycyclic heteroaryl, each optionally substituted with one or more electron donating group substituted phenyl; R2 and R3 = hydrogen, alkyl, aryl, alkylaryl, substituted alkyl, substituted aryl, and substituted alkylaryl; and n = integer 1-10.			
IT	121225-97-6P			
(accelerators for cationic photopolymer.)				
RN	121225-97-6 HCAPLUS			
CN	Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]-, homopolymer (CA INDEX NAME)			
CM	1			
CRN	18724-32-8			
CMF	C20 H38 O3 Si2			



IC ICM C08G065-10  
ICS C08G059-68; C08F002-50

CC 35-3 (Chemistry of Synthetic High Polymers)

ST cationic photoinitiator phenolic resin accelerator epoxy resin prep

IT Photosensitizers, pharmaceutical  
(accelerators for cationic photopolymer.)

IT Polymerization catalysts  
(cationic, photochem.; accelerators for cationic photopolymer.)

IT Phenolic resins, uses  
(resol, accelerators; accelerators for cationic photopolymer.)

IT 129-00-0, Pyrene, uses 495-76-1, Piperonyl alcohol 1468-95-7,  
9-Anthracenemethanol 24324-17-2, 9-Fluorenamethanol 24471-30-5,  
3-Perylenemethanol  
(accelerator; accelerators for cationic photopolymer.)

IT 24463-15-8P, 1-Pyrenemethanol  
(accelerator; accelerators for cationic photopolymer.)

IT 93-03-8, 3,4-Dimethoxybenzyl alcohol 100-51-6, Benzyl alcohol, uses  
105-13-5, 4-Methoxybenzyl alcohol 619-73-8, 4-Nitrobenzyl alcohol  
873-76-7, 4-Chlorobenzyl alcohol 125740-41-2,  
(4-n-Decyloxyphenyl)phenyliodonium hexafluoroantimonate 127279-76-9,  
(4-n-Decyloxyphenyl)diphenylsulfonium hexafluoroantimonate  
259669-57-3, 8-Dodecyl-S-methyl-S-phenacylsulfonium  
hexafluoroantimonate  
(accelerators for cationic photopolymer.)

IT 25085-98-7P, 3,4-Epoxy-cyclohexylmethyl 3',4'-epoxycyclohexane  
carboxylate homopolymer 25085-99-8P, Bisphenol A diglycidyl ether  
homopolymer 25086-25-3P, 4-Vinylcyclohexene dioxide homopolymer  
29160-08-5P, 2-Chloroethyl vinyl ether homopolymer 29616-43-1P,  
Limonene dioxide homopolymer 121225-97-6P 142675-43-2P,  
Bis(3-ethyl-3-oxetanylmethyl)ether homopolymer  
(accelerators for cationic photopolymer.)

IT 3029-19-4P, 1-Pyrenecarboxaldehyde 35438-63-2P,  
3-Perylenecarboxaldehyde  
(accelerators for cationic photopolymer.)

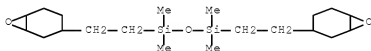
IT 93-61-8, N-Methylformanilide 95-50-1, o-Dichlorobenzene  
(accelerators for cationic photopolymer.)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS  
RECORD (2 CITINGS)

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
RE FORMAT

L27 ANSWER 7 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2003:453679 HCAPLUS [Full-text](#)  
DOCUMENT NUMBER: 139:261583  
TITLE: Photosensitization of onium salt  
initiated cationic photopolymerizations

AUTHOR(S): by carbazole monomers, polymers, and oligomers  
 Hua, Yujing; Crivello, James V.  
 CORPORATE SOURCE: Department of Chemistry, New York Center for  
 Polymer Synthesis, Rensselaer Polytechnic  
 Institute, Troy, NY, 12180, USA  
 SOURCE: ACS Symposium Series (2003),  
 847(Photoinitiated Polymerization), 219-230  
 CODEN: ACSMC8; ISSN: 0097-6156  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 13 Jun 2003  
 AB Carbazole compds. are efficient electron-transfer photosensitizers for onium  
 salt photoinitiated cationic polymers. of vinyl and heterocyclic monomers.  
 Oligomers and polymers containing carbazole groups are especially attractive  
 as photosensitizers. Copolymers of N-vinylcarbazole (NVK) with vinyl monomers  
 and a dimeric photosensitizer were also synthesized and shown to be efficient  
 onium salt photosensitizers.  
 IT 18724-32-8  
 (monomer; photosensitization of onium salt-initiated  
 cationic photopolymers. of vinyl and heterocyclic monomers  
 by carbazole monomers, polymers, and oligomers)  
 RN 18724-32-8 HCAPLUS  
 CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(7-oxabicyclo[4.1.0]hept-3-  
 yl)ethyl]- (CA INDEX NAME)



CC 35-3 (Chemistry of Synthetic High Polymers)  
 ST photosensitizer onium salt photoinitiator  
 cationic photopolymer; vinyl monomer photochem polymer  
 onium salt photoinitiator; epoxy monomer photochem polymer onium salt  
 photoinitiator  
 IT Polymerization  
 (cationic, photochem.; photosensitization of onium  
 salt-initiated cationic photopolymers. of vinyl and  
 heterocyclic monomers by carbazole monomers, polymers, and  
 oligomers)  
 IT Polymerization  
 (cationic, ring-opening, photochem.; photosensitization  
 of onium salt-initiated cationic photopolymers. of vinyl  
 and heterocyclic monomers by carbazole monomers, polymers, and  
 oligomers)  
 IT 96-08-2, Limonene dioxide 286-20-4, Cyclohexene oxide 2386-87-0  
 18724-32-8  
 (monomer; photosensitization of onium salt-initiated  
 cationic photopolymers. of vinyl and heterocyclic monomers  
 by carbazole monomers, polymers, and oligomers)  
 IT 125740-41-2, IOC10 127279-76-9, SOC10 259879-93-1  
 (photoinitiator; photosensitization of onium  
 salt-initiated cationic photopolymers. of vinyl and  
 heterocyclic monomers by carbazole monomers, polymers, and  
 oligomers)



IT 1484-13-5, N-Vinylcarbazole  
(photosensitizer and reactant; photosensitization of onium salt-initiated cationic photopolymers. of vinyl and heterocyclic monomers by carbazole monomers, polymers, and oligomers)

IT 30699-70-8, Butyl acrylate-N-vinylcarbazole copolymer 38438-74-3, Diethyl fumarate-N-vinylcarbazole copolymer  
(photosensitizer; photosensitization of onium salt-initiated cationic photopolymers. of vinyl and heterocyclic monomers by carbazole monomers, polymers, and oligomers)

IT 340160-27-2P  
(photosensitizer; photosensitization of onium salt-initiated cationic photopolymers. of vinyl and heterocyclic monomers by carbazole monomers, polymers, and oligomers)

IT 86-28-2P, N-Ethylcarbazole 25067-59-8P, Poly(vinylcarbazole)  
(photosensitizer; photosensitization of onium salt-initiated cationic photopolymers. of vinyl and heterocyclic monomers by carbazole monomers, polymers, and oligomers)

IT 3277-26-7, 1,1,3,3-Tetramethyldisiloxane  
(reactant; in preparation of dimeric photosensitizer for use in onium salt-initiated cationic photopolymers. of vinyl and heterocyclic monomers)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 8 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:787054 HCAPLUS Full-text

DOCUMENT NUMBER: 138:25008

TITLE: Development of Pyrene Photosensitizers for Cationic Photopolymerizations

AUTHOR(S): Crivello, James V.; Jiang, Faming

CORPORATE SOURCE: New York State Center for Polymer Synthesis, Department of Chemistry, Rensselaer Polytechnic Institute, Troy, NY, 12180, USA

SOURCE: Chemistry of Materials (2002), 14(11), 4858-4866

CODEN: CMATEX; ISSN: 0897-4756

PUBLISHER: American Chemical Society

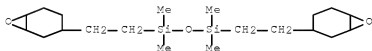
DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 16 Oct 2002

AB This article describes the preparation of monomeric and oligomeric derivs. of pyrene and their use as electron-transfer photosensitizers for onium-salt-induced cationic photopolymers. The synthetic methods that were employed involved simple, straightforward, and high-yield routes to these derivs. Using Fourier transform real-time IR spectroscopy, the photoinduced polymers. of several model epoxide monomers and a vinyl ether monomer were examined in the presence and absence of the photosensitizers. In all cases the pyrene derivs. markedly accelerated the rates of the UV-irradiation-induced photopolymers. Use of the pyrene derivs. also provided sensitivity to visible light so that photopolymers. could be carried out in a short time by exposure to direct sunlight. The pyrene compds. investigated in this study are potentially attractive photosensitizers that may find use in many practical photocuring applications.

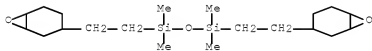
- IT 18724-32-8  
 (cationic photopolymns. and photocuring of  
 epoxides and vinyl ethers with pyrene photosensitizers)
- RN 18724-32-8 HCAPLUS
- CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]- (CA INDEX NAME)



- IT 121225-97-6P, PC 1000  
 (cationic photopolymns. and photocuring of  
 epoxides and vinyl ethers with pyrene photosensitizers)
- RN 121225-97-6 HCAPLUS
- CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]-, homopolymer (CA INDEX NAME)

CM 1

CRN 18724-32-8  
 CMF C20 H38 O3 Si2



- CC 35-3 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 37, 67
- ST pyrene deriv photosensitizer cationic photopolymn  
 photocuring
- IT Epoxy resins, preparation  
 (cationic photopolymns. and photocuring of  
 epoxides and vinyl ethers with pyrene photosensitizers)
- IT Polymerization catalysts  
 Polymerization kinetics  
 (cationic, photochem.; cationic photopolymns. and  
 photocuring of epoxides and vinyl ethers with pyrene  
 photosensitizers)
- IT Crosslinking catalysts  
 Crosslinking kinetics  
 (photochem.; cationic photopolymns. and  
 photocuring of epoxides and vinyl ethers with pyrene  
 photosensitizers)
- IT 127279-76-9, (4-Decyloxyphenyl)diphenylsulfonium hexafluoroantimonate  
 (SOC 10, photoinitiator; cationic  
 photopolymns. and photocuring of epoxides and  
 vinyl ethers with pyrene photosensitizers)
- IT 106-86-5, 4-Vinylcyclohexene oxide 110-75-8, 2-Chloroethyl vinyl

ether 286-20-4, Cyclohexene oxide 18724-32-8  
 (cationic photopolymers. and photocuring of  
 epoxides and vinyl ethers with pyrene photosensitizers)

IT 25702-20-9P, Cyclohexene oxide homopolymer 29160-08-5P,  
 2-Chloroethyl vinyl ether homopolymer 29829-07-0P,  
 4-Vinylcyclohexene oxide homopolymer 121225-97-6P, PC 1000  
 (cationic photopolymers. and photocuring of  
 epoxides and vinyl ethers with pyrene photosensitizers)

IT 3029-19-4P, 1-Pyrenecarboxaldehyde 24463-15-8P, 1-Pyrenemethanol  
 144096-40-2P  
 (intermediate; preparation of pyrene photosensitizers for  
 cationic photopolymers. of epoxides and vinyl ethers)

IT 125740-41-2, IOC 10 259669-57-3,  
 S-Dodecyl-S-methyl-S-phenacylsulfonium hexafluoroantimonate  
 (photoinitiator; cationic photopolymers  
 . and photocuring of epoxides and vinyl ethers with  
 pyrene photosensitizers)

IT 477953-01-8P 477953-02-9P 477953-03-0P 477953-06-3P  
 (photosensitizer; preparation of pyrene  
 photosensitizers for cationic photopolymers. of  
 epoxides and vinyl ethers)

IT 123-39-7, N-Methylformamide 129-00-0, Pyrene, reactions 143-15-7,  
 Dodecyl bromide 15890-72-9, Dodecylmagnesium bromide  
 (starting material; preparation of pyrene photosensitizers for  
 cationic photopolymers. of epoxides and vinyl ethers)

OS.CITING REF COUNT: 31 THERE ARE 31 CAPLUS RECORDS THAT CITE THIS  
 RECORD (31 CITINGS)

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
 RE FORMAT

L27 ANSWER 9 OF 25 HCAPLUS COPYRIGHT 2009 ACS ON STN

ACCESSION NUMBER: 2002:753712 HCAPLUS Full-text

DOCUMENT NUMBER: 138:39588

TITLE: Synthesis and photoactivity of novel  
 5-arylthianthrenium salt cationic  
 photoinitiators

AUTHOR(S): Crivello, James V.; Ma, Junqing; Jiang, Faming  
 CORPORATE SOURCE: New York State Center for Polymer Synthesis,  
 Department of Chemistry, Rensselaer Polytechnic  
 Institute, Troy, NY, 12180, USA

SOURCE: Journal of Polymer Science, Part A: Polymer  
 Chemistry (2002), 40(20), 3465-3480  
 CODEN: JPACEC; ISSN: 0887-624X

PUBLISHER: John Wiley & Sons, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 04 Oct 2002

AB 5-Arylthianthrenium salts are a class of efficient triarylsulfonium salt  
 photoinitiators for cationic polymerization. The compounds were prepared by a  
 simple, straightforward, versatile, and high yield route. The photoinitiators  
 were characterized by standard anal. and spectroscopic techniques, and their  
 activity as cationic photoinitiators was compared with that of related  
 triarylsulfonium salts of similar structures using Fourier transform real-time  
 IR spectroscopy. Through the use of electron-transfer photosensitizers, the  
 response of these photoinitiators can be readily spectrally broadened into the  
 long-wavelength UV-visible regions of the spectrum. The results obtained  
 suggest that 5-arylthianthrenium salts are potential replacements for now  
 available triarylsulfonium salt photoinitiators in many applications.

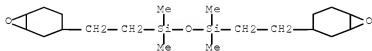
IT 18724-32-8, 1,3-Bis(3,4-epoxycyclohexyl-2-ethyl)-1,1,3,3-

## tetramethyldisiloxane

(monomer; preparation and characterization and activity of arylthianthrenium hexafluoroantimonates and hexafluorophosphates as photoinitiators in cationic polymns.)

RN 18724-32-8 HCAPLUS

CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]- (CA INDEX NAME)



IT 121225-97-6P, PC 1000

(preparation and characterization and activity of arylthianthrenium hexafluoroantimonates and hexafluorophosphates as photoinitiators in cationic polymns.)

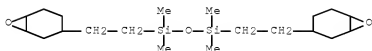
RN 121225-97-6 HCAPLUS

CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]-, homopolymer (CA INDEX NAME)

CM 1

CRN 18724-32-8

CMF C20 H38 O3 Si2



CC 35-3 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 74

ST arylthianthrenium salt prepn photoinitiator cationic polymn; thianthrenium arom antimonate phosphate prepn improved photosensitizer

IT Named reagents and solutions

(Eaton's; preparation and characterization and activity of arylthianthrenium hexafluoroantimonates and hexafluorophosphates as photoinitiators in cationic polymns.)

IT NMR (nuclear magnetic resonance)

(carbon-13; preparation and characterization and activity of arylthianthrenium hexafluoroantimonates and hexafluorophosphates as photoinitiators in cationic polymns.)

IT Polymerization

Polymerization kinetics

(cationic; preparation and characterization and activity of arylthianthrenium hexafluoroantimonates and hexafluorophosphates as photoinitiators in cationic polymns.)

IT Polymerization catalysts

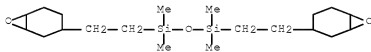
(photopolymn., latent, thermally activated; preparation and

characterization and activity of arylthianthrenium  
hexafluoroantimonates and hexafluorophosphates as  
photoinitiators in cationic polymers.)

- IT Condensation reaction  
Electron transfer  
Metathesis  
NMR (nuclear magnetic resonance)  
Oxidation  
Photolysis  
UV and visible spectra  
(preparation and characterization and activity of arylthianthrenium  
hexafluoroantimonates and hexafluorophosphates as  
photoinitiators in cationic polymers.)
- IT 96-08-2, Limonene dioxide 106-87-6, 4-Vinylcyclohexene dioxide  
110-75-8, 2-Chloroethyl vinyl ether 286-20-4, Cyclohexene oxide  
765-12-8, Triethylene glycol divinyl ether 3897-65-2,  
(3-Ethyl-3-oxetanylmethyl) phenyl ether 18724-32-8,  
1,3-Bis(3,4-epoxycyclohexyl-2-ethyl)-1,1,3,3-tetramethyldisiloxane  
18934-00-4, Bis(3-ethyl-3-oxetanylmethyl) ether  
(monomer; preparation and characterization and activity of  
arylthianthrenium hexafluoroantimonates and hexafluorophosphates as  
photoinitiators in cationic polymers.)
- IT 478774-48-0P, 5(4-Methoxyphenyl)thianthrenium Hexafluoroantimonate  
478774-49-1P 478774-50-4P 478774-52-6P 478774-54-8P  
478774-56-0P 478774-57-1P 478774-59-3P 478774-60-6P  
478774-61-7P 478774-62-8P 478774-63-9P 478774-65-1P  
478774-66-2P 478774-68-4P  
(preparation and characterization and activity of arylthianthrenium  
hexafluoroantimonates and hexafluorophosphates as  
photoinitiators in cationic polymers.)
- IT 25086-25-3P, 4-Vinylcyclohexene dioxide homopolymer 25702-20-9P,  
Cyclohexene oxide homopolymer 29160-08-5P, 2-Chloroethyl vinyl ether  
homopolymer 29616-43-1P, Limonene dioxide homopolymer 31667-45-5P,  
Triethylene glycol divinyl ether homopolymer 121225-97-6P,  
PC 1000 142675-43-2P, Bis(3-ethyl-3-oxetanylmethyl) ether  
homopolymer 167499-43-6P, (3-Ethyl-3-oxetanylmethyl) phenyl ether  
homopolymer  
(preparation and characterization and activity of arylthianthrenium  
hexafluoroantimonates and hexafluorophosphates as  
photoinitiators in cationic polymers.)
- IT 100-66-3, Anisole, reactions 2362-50-7, Thianthrene-5-oxide  
17084-13-8, Potassium hexafluorophosphate  
(preparation and characterization and activity of arylthianthrenium  
hexafluoroantimonates and hexafluorophosphates as  
photoinitiators in cationic polymers.)
- IT 75-75-2, Methanesulfonic acid 1314-56-3, Phosphorus oxide (P2O5),  
reactions  
(preparation and characterization and activity of arylthianthrenium  
hexafluoroantimonates and hexafluorophosphates as  
photoinitiators in cationic polymers.)
- OS.CITING REF COUNT: 17 THERE ARE 17 CAPLUS RECORDS THAT CITE THIS  
RECORD (17 CITINGS)
- REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
RE FORMAT

L27 ANSWER 10 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2001:662164 HCAPLUS [Full-text](#)  
DOCUMENT NUMBER: 135:358213  
TITLE: Diazonium salts as cationic

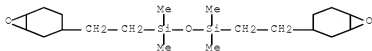
photoinitiators - radical and cationic aspects  
 AUTHOR(S): Muller, Uwe  
 CORPORATE SOURCE: Kompetenzzentrum Holz GmbH, Linz, 4021, Austria  
 SOURCE: Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2001), 42(2), 777-778  
 CODEN: ACPPAY; ISSN: 0032-3934  
 PUBLISHER: American Chemical Society, Division of Polymer Chemistry  
 DOCUMENT TYPE: Journal; (computer optical disk)  
 LANGUAGE: English  
 ED Entered STN: 11 Sep 2001  
 AB 4-Hexyloxysubstituted diazonium salts with complex anions are thermostable compds. in several solvents and initiate efficiently the photocrosslinking of vinyl ethers and epoxides. Interestingly, oxygen influences the efficiency of this cationic process. Alpha-ether radicals induce a secondary radical induced cation formation. Such reactions are always possible if Ered of the onium salt is lower than -1V. Oxygen inhibits this radical induced cation formation. On the other hand, the decay of peroxides results in a branched radical reaction. The reaction rate is faster under air with respect to inert conditions. The high thermostability of the used salt decreases by addition of a small amount of monomer. A bimol. dediazonation mechanism explains the observed effects. This mechanism produces directly initiating cationic species, which start the cationic polymerization. The monomer and its byproducts are the cause of the poor thermal stability of the diazonium salts and not the own thermal instability of the salt used.  
 IT 121225-97-6P  
 (diazonium salts as cationic photoinitiators)  
 RN 121225-97-6 HCAPLUS  
 CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]-, homopolymer (CA INDEX NAME)  
 CM 1  
 CRN 18724-32-8  
 CMF C20 H38 O3 Si2



CC 35-3 (Chemistry of Synthetic High Polymers)  
 ST diazonium salt cationic photoinitiator  
 IT Polymerization catalysts  
 (cationic, photochem.; diazonium salts as cationic photoinitiators)  
 IT Epoxy resins, preparation  
 (diazonium salts as cationic photoinitiators)  
 IT 89505-13-5 348630-98-8  
 (diazonium salts as cationic photoinitiators)  
 IT 121225-97-6P  
 (diazonium salts as cationic photoinitiators)  
 OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 11 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2001:237259 HCAPLUS [Full-text](#)  
 DOCUMENT NUMBER: 135:99680  
 TITLE: New insights about diazonium salts as cationic photoinitiators  
 AUTHOR(S): Muller, U.; Utterodt, A.; Morke, W.; Deubzer, B.; Herzig, C.  
 CORPORATE SOURCE: Institut für Organische Chemie, Martin-Luther-Universität, Halle-Wittenberg, Merseburg, D-06217, Germany  
 SOURCE: Journal of Photochemistry and Photobiology, A: Chemistry (2001), 140(1), 53-66  
 CODEN: JPPCEJ; ISSN: 1010-6030  
 PUBLISHER: Elsevier Science S.A.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 04 Apr 2001  
 AB 4-Hexyloxysubstituted diazonium salts with complex anions are thermostable compds. in several solvents (dioxane: 12 days; 1,2-dichloroethane: 410 days; 40° C; salt as SbF<sub>6</sub><sup>-</sup>). These salts initiate efficiently the photocrosslinking of vinyl ethers and epoxides. Interestingly, oxygen influences the efficiency of this cationic process. EPR-expts. prove that radicals possess a key function for the production of the initiating species. α-Ether radicals induce a secondary radical-induced cation formation. Such reactions are always possible if Ered of the onium salt is lower than -1 V. Oxygen inhibits this radical-induced cation formation. On the other hand, the decay of peroxides results in a branched radical reaction. The reaction rate is faster under air with respect to inert conditions. The high thermostability of the used salt decreases by addition of a small amount of monomer. A bimol. de-diazonium mechanism explains the observed effects. This mechanism produces directly initiating cationic species, which start the cationic polymerization. The monomer and its byproducts are the cause of the poor thermal stability of the diazonium salts and not the own thermal instability of the salt used.  
 IT 18724-32-8  
 (properties and reaction mechanism of hexyloxysubstituted diazonium salts with complex anions as cationic photoinitiators)  
 RN 18724-32-8 HCAPLUS  
 CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]- (CA INDEX NAME)



CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 36  
 ST hexyloxysubstituted diazonium salt cationic photocrosslinking photoinitiator thermal stability

- IT Crosslinking catalysts  
(cationic, photochem.; properties and reaction mechanism of hexyloxysubstituted diazonium salts with complex anions as cationic photoinitiators)
- IT Polymerization catalysts  
(photopolymer.; properties and reaction mechanism of hexyloxysubstituted diazonium salts with complex anions as cationic photoinitiators)
- IT ESR (electron spin resonance)  
Photoinduced electron transfer  
Photolysis  
Photolysis kinetics  
Thermal stability  
(properties and reaction mechanism of hexyloxysubstituted diazonium salts with complex anions as cationic photoinitiators)
- IT 88360-98-9 89505-13-5 348630-96-6 348630-97-7 348630-98-8  
348635-82-5  
(properties and reaction mechanism of hexyloxysubstituted diazonium salts with complex anions as cationic photoinitiators)
- IT 7782-44-7, Oxygen, properties  
(properties and reaction mechanism of hexyloxysubstituted diazonium salts with complex anions as cationic photoinitiators)
- IT 764-78-3 765-12-8, 3,6,9,12-Tetraoxatetradeca-1,13-diene  
18724-32-8  
(properties and reaction mechanism of hexyloxysubstituted diazonium salts with complex anions as cationic photoinitiators)
- IT 107-06-2, 1,2-Dichloroethane, properties 123-91-1, Dioxane, properties  
(solvent effect; stability of hexyloxysubstituted diazonium salts with complex anions as cationic photoinitiators)

OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 12 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:181776 HCAPLUS Full-text

DOCUMENT NUMBER: 134:367244

TITLE: Development of Polymeric Photosensitizers for Photoinitiated Cationic Polymerization

AUTHOR(S): Hua, Yujing; Crivello, James V.

CORPORATE SOURCE: New York State Center for Polymer Synthesis  
Department of Chemistry, Rensselaer Polytechnic Institute, Troy, NY, 12180, USA

SOURCE: Macromolecules (2001), 34(8), 2488-2494

CODEN: MAMOBX; ISSN: 0024-9297

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

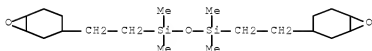
ED Entered STN: 16 Mar 2001

AB Enhancement of the rates of onium salt photoinitiated cationic polymers of epoxides and vinyl ethers has been achieved through the use of oligomeric and polymeric electron-transfer photosensitizers. Poly(N-vinylcarbazole) (PVK) is an especially attractive and efficient photosensitizer. The use of PVK as a



photosensitizer for the cationic photopolymers of vinyl ethers and epoxides was examined in detail. PVK functions as an electron-transfer photosensitizer for a wide variety of onium salt cationic photoinitiators, including diaryliodonium, triarylsulfonium, and dialkylphenacylsulfonium salts. The broadening of the spectral response through the use of these photosensitizers accounts for the observed rate enhancement of these polymerization reactions. Alternating copolymers prepared by the free radical polymerization of N-vinylcarbazole (NVK) with vinyl monomers also exhibit excellent photosensitization activity. Also described in this paper is the synthesis and use of a dimeric photosensitizer prepared by the hydrosilylation of N-vinylcarbazole with 1,1,3,3-tetramethyldisiloxane.

IT 121225-97-6P  
(preparation of; by photoinitiated cationic polymerization with polymeric photosensitizers)  
RN 121225-97-6 HCAPLUS  
CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]-, homopolymer (CA INDEX NAME)  
CM 1  
CRN 18724-32-8  
CMF C20 H38 O3 Si2



CC 35-3 (Chemistry of Synthetic High Polymers)  
ST polymeric photosensitizer cationic polymn catalyst prepn;  
diethyl fumarate vinylcarbazole copolymer photosensitizer  
prepn; butyl acrylate vinylcarbazole copolymer photosensitizer  
prepn  
IT Polymerization  
(cationic; in polymer preparation by photoinitiated cationic polymerization with polymeric photosensitizers)  
IT Solubility  
(in photoinitiated cationic polymerization with polymeric photosensitizers)  
IT Epoxy resins, reactions  
(in polymer preparation by photoinitiated cationic polymerization with polymeric photosensitizers)  
IT Photolysis catalysts  
(photosensitizers; preparation of polymeric photosensitizers for photoinitiated cationic polymerization)  
IT Ethers, reactions  
(vinyl; in polymer preparation by photoinitiated cationic polymerization with polymeric photosensitizers)  
IT 1484-13-5, N-Vinylcarbazole  
(in polymer preparation by photoinitiated cationic polymerization with polymeric photosensitizers)  
IT 3277-26-7, 1,1,3,3-Tetramethyldisiloxane  
(in preparation of polymeric photosensitizers for photoinitiated cationic polymerization)  
IT 340160-27-2P

(in preparation of polymeric photosensitizers for photoinitiated cationic polymerization)

IT 25067-59-8, Poly(N-vinylcarbazole)  
(photosensitizers; in photoinitiated cationic polymerization with polymeric photosensitizers)

IT 30699-70-8P, Butyl acrylate N-vinylcarbazole copolymer 38438-74-3P,  
Diethyl fumarate N-vinylcarbazole copolymer  
(photosensitizers; preparation of polymeric photosensitizers for photoinitiated cationic polymerization)

IT 25085-98-7P, 3,4-Epoxy cyclohexylmethyl  
3',4'-epoxycyclohexanecarboxylate homopolymer 25086-25-3P,  
4-Vinylcyclohexene dioxide homopolymer 25702-20-9P, Cyclohexene  
oxide homopolymer 29160-08-5P, 2-Chloroethyl vinyl ether homopolymer  
29616-43-1P, Limonene dioxide homopolymer 121225-97-6P  
(preparation of; by photoinitiated cationic polymerization with polymeric photosensitizers)

OS.CITING REF COUNT: 20 THERE ARE 20 CAPLUS RECORDS THAT CITE THIS  
RECORD (20 CITINGS)

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
RE FORMAT

L27 ANSWER 13 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2000:511741 HCAPLUS Full-text

DOCUMENT NUMBER: 133:127627

TITLE: Heat development photosensitive material  
and processing of heat-developed image

INVENTOR(S): Tanabe, Junichi

PATENT ASSIGNEE(S): Konica Co., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.  
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2000206640	A	20000728	JP 1999-6327	19990113
			<--	
PRIORITY APPLN. INFO.:			JP 1999-6327	19990113
			<--	

ED Entered STN: 28 Jul 2000

AB The title photosensitive material, containing an organic Ag salt,  
photosensitive Ag halide grains, and a reducing agent on a support, contains  
an UV-curing or electron beam-curing resin. The images formed in the material  
are irradiated with UV rays or electron beams. The material shows high film  
phys. properties, improved developed Ag tone, and low moisture dependence of  
the dimension after image formation.

IT 121225-97-6P  
(photothermog. material containing organic silver salt, silver halide,  
reducing agent, and curable resin)

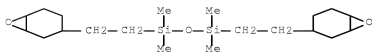
RN 121225-97-6 HCAPLUS

CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]-, homopolymer (CA INDEX NAME)

CM 1

CRN 18724-32-8

CMF C20 H38 O3 Si2



- IC ICM G03C001-498  
ICS G03C001-76
- CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38
- ST heat developable photosensitive compn silver salt;  
UV curable resin photothermog material;  
electron beam curable resin photothermog material
- IT Photothermograpic copying  
(photothermog. material containing organic silver salt, silver halide, reducing agent, and UV-curable resin)
- IT 7575-23-7DP, Pentaerythritol tetrakis(3-mercaptopropionate), derivs.  
9003-69-4P, Divinylbenzene homopolymer 10193-99-4DP, Pentaerythritol tetrakis(2-mercaptoacetate), derivs. 22504-50-3DP, Ethylene glycol bis(3-mercaptopropionate), derivs. 25086-25-3P 26616-47-7P  
27775-58-2P, Pentaerythritol triacrylate homopolymer 29403-60-9P  
39409-92-2P 57592-67-3P, 1,6-Hexanediol diacrylate homopolymer  
68924-34-5P 121225-97-6P 157243-23-7P 285558-93-2P  
(photothermog. material containing organic silver salt, silver halide, reducing agent, and curable resin)

L27 ANSWER 14 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2000:368492 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 133:18918

TITLE: Energy-curable gravure and ink jet inks incorporating grafted pigments

INVENTOR(S): Laksin, Mikhail; Chatterjee, Subhankar; Schwartz, Russell; Merchak, Paul A.; Aurenty, Patrice; Stone, Edward; Kotora, Gordon

PATENT ASSIGNEE(S): Sun Chemical Corp., USA

SOURCE: PCT Int. Appl., 58 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000031189	A1	20000602	WO 1999-US27038	19991115
<--				
W: CA				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2351472	A1	20000602	CA 1999-2351472	19991115
<--				
EP 1133533	A1	20010919	EP 1999-958989	19991115
<--				
EP 1133533	B1	20040714		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,				

PT, IE, FI  
 JP 2003531223 T 20031021 JP 2001-576398 19991115  
 <--  
 TW 255284 B 20060521 TW 2000-89104349 20000310  
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 PRIORITY APPLN. INFO.: US 1998-198113 A 19981123  
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 WO 1999-US27038 W 19991115  
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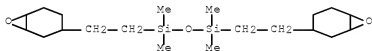
ED Entered STN: 04 Jun 2000

AB Solvent-free, energy-curable low-viscosity gravure and ink jet inks contain a pigment; a rheol. additive having the structure P(UY)<sub>s</sub> (P is the residue of an organic pigment or dye; Y is a polyalkylene oxide moiety; U is a linking moiety covalently bonding Y to P; s = 1-3); and an energy-curable liquid vehicle which may be an UV cationic, thermal cationic or a free radical-initiated polymerization system, cured by actinic radiation, optionally containing a photoinitiator. Thus, Cu phthalocyaninesulfonyl chloride was condensed with XTJ 507 (H<sub>2</sub>N-terminated 5:95 ethylene oxide-propylene oxide copolymer) to give a rheol. additive. A radiation-curable gravure ink was formulated from Cyacure 6110 15, a modified pigment from 79% Pigment Blue 15:4 and 12% (sic) of the rheol. additive 5, CD 1012 2, Irgacure 261 0.5, triethylene glycol divinyl ether 76, polyethylene wax 1, and silicone DC 57 0.5 weight%. The ink had lower viscosity and gave a print of higher color d. and gloss than a conventional ink based on Pigment Blue 15:4.

IT 18724-32-8  
 (S 200 (reactive diluent); radiation-curable gravure and ink jet inks incorporating grafted pigments)

RN 18724-32-8 HCAPLUS

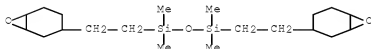
CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]- (CA INDEX NAME)



IC ICM C09B069-00  
 ICS C09D011-10; C09B067-22; C09D011-02  
 CC 42-12 (Coatings, Inks, and Related Products)  
 ST gravure ink radiation curable; ink jet ink radiation curable; polyoxyalkylene grafted phthalocyanine pigment  
 IT Linseed oil  
 (epoxidized; radiation-curable gravure and ink jet inks incorporating grafted pigments)  
 IT Inks  
 (gravure; radiation-curable gravure and ink jet inks incorporating grafted pigments)  
 IT Inks  
 (jet-printing; radiation-curable gravure and ink jet inks incorporating grafted pigments)  
 IT Electron beams  
 UV radiation  
 (radiation-curable gravure and ink jet inks incorporating grafted pigments)

- IT Carbon black, uses  
(radiation-curable gravure and ink jet inks  
incorporating grafted pigments)
- IT 2386-87-0, 3,4-Epoxy cyclohexylmethyl 3,4-epoxycyclohexanecarboxylate  
(Cyracure UVI 6105, Cyracure UVI 6110; radiation  
-curable gravure and ink jet inks incorporating grafted  
pigments)
- IT 18724-32-8  
(S 200 (reactive diluent); radiation-  
curable gravure and ink jet inks incorporating grafted  
pigments)
- IT 2602-34-8, Silane, triethoxy[3-(oxiranylmethoxy)propyl]-  
(Z 6041; radiation-curable gravure and ink jet  
inks incorporating grafted pigments)
- IT 32760-80-8, Irgacure 261 60933-18-8, Fluorad FC 520 104558-94-3,  
Cyracure UVI 6974 139301-16-9, CD 1012 273203-78-4, TLC  
14-12  
(radiation-curable gravure and ink jet inks  
incorporating grafted pigments)
- IT 96-08-2, Limonene dioxide 147-14-8, C.I. Pigment Blue 15:4  
765-12-8, Triethylene glycol divinyl ether 1328-53-6, C.I. Pigment  
Green 7 2379-79-5, C.I. Pigment Red 196 2512-29-0, C.I. Pigment  
Yellow 1 2530-83-8, Z 6040 2786-76-7, C.I. Pigment Red 170  
3388-04-3, E 6250 3468-63-1, C.I. Pigment Orange 5 3520-72-7, C.I.  
Pigment Orange 13 4531-49-1, C.I. Pigment Yellow 17 5102-83-0,  
C.I. Pigment Yellow 13 5280-68-2, C.I. Pigment Red 146 5468-75-7,  
C.I. Pigment Yellow 14 5567-15-7, C.I. Pigment Yellow 83  
6041-94-7, C.I. Pigment Red 2 6358-31-2, C.I. Pigment Yellow 74  
6358-85-6, C.I. Pigment Yellow 12 6358-87-8, C.I. Pigment Red 38  
6358-90-3, C.I. Pigment Red 42 6410-38-4, C.I. Pigment Red 9  
6448-95-9, C.I. Pigment Red 22 6471-49-4, C.I. Pigment Red 23  
6471-50-7, C.I. Pigment Red 14 6486-23-3, C.I. Pigment Yellow 3  
6505-28-8, C.I. Pigment Orange 16 6528-34-3, C.I. Pigment Yellow 65  
6535-46-2, C.I. Pigment Red 112 6655-84-1, C.I. Pigment Red 17  
6883-91-6, C.I. Pigment Red 37 12225-18-2, C.I. Pigment Yellow 97  
12225-23-9, C.I. Pigment Yellow 106 13515-40-7, C.I. Pigment Yellow  
73 14302-13-7, C.I. Pigment Green 36 14569-54-1, C.I. Pigment  
Yellow 63 15793-73-4, C.I. Pigment Orange 34 23792-68-9, C.I.  
Pigment Yellow 188 32432-45-4, C.I. Pigment Yellow 98 52320-66-8,  
C.I. Pigment Yellow 75 61932-63-6, C.I. Pigment Red 210  
68610-86-6, C.I. Pigment Yellow 127 68610-87-7, C.I. Pigment Yellow  
114 68859-25-6, C.I. Pigment Yellow 37 78952-72-4, C.I. Pigment  
Yellow 174 90268-23-8, C.I. Pigment Yellow 126 90268-24-9, C.I.  
Pigment Yellow 176 140114-63-2, C.I. Pigment Red 238 141952-16-1,  
ERLX 4683 181285-33-6, C.I. Pigment Yellow 136 215247-95-3, C.I.  
Pigment Violet 23  
(radiation-curable gravure and ink jet inks  
incorporating grafted pigments)
- IT 6358-85-6D, C.I. Pigment Yellow 12, polyoxyalkylene derivative  
9003-11-6D, Ethylene oxide-propylene oxide copolymer, copper  
phthalocyaninesulfonamide-terminated  
(rheol. additive; radiation-curable gravure and  
ink jet inks incorporating grafted pigments)
- OS.CITING REF COUNT: 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS  
RECORD (14 CITINGS)
- REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
RE FORMAT

ACCESSION NUMBER: 2000:257696 HCAPLUS [Full-text](#)  
 DOCUMENT NUMBER: 133:17872  
 TITLE: Long-wavelength-absorbing dialkylphenacylsulfonium salt photoinitiators: synthesis and photoinduced cationic polymerization  
 AUTHOR(S): Crivello, James V.; Kong, Shengqian  
 CORPORATE SOURCE: New York State Center for Polymer Synthesis, Department of Chemistry, Rensselaer Polytechnic Institute, Troy, NY, 12180, USA  
 SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (2000), 38(9), 1433-1442  
 CODEN: JPACEC; ISSN: 0887-624X  
 PUBLISHER: John Wiley & Sons, Inc.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 21 Apr 2000  
 AB A series of sulfonium salt photoinitiators with the general structure Ar'S+CH3(C12H25)SbF6-, where Ar' is phenacyl (I), 2-indanonyl (II), 4-methoxyphenacyl (III), 2-naphthoylmethyl (IV), 1-anthroylmethyl (V), or 1-pyrenoylmethyl (VI), were prepared with a novel, simple one-pot process that involves the reaction of an  $\alpha$ -bromoalkylarylketone (Ar'Br) with the dialkylsulfide (CH3SC12H25) in the presence of sodium hexafluoroantimonate in 2-butanone at room temperature. The photoreactivity of photoinitiators II-VI were evaluated and compared to the unsubstituted analog, I, in the polymerization of a variety of epoxide monomers. Real-time IR spectroscopy and differential scanning photocalorimetry studies revealed that the indanonyl initiator II is more active than I. However, sulfonium salts IV-VI, which contain polycyclic aromatic structures, are much less effective as cationic photoinitiators. Interestingly, photoinitiator III is either more or less reactive compared to I, depending on the monomer used. Our work also showed that the efficiency of the unsubstituted phenacylsulfonium salt I can be significantly enhanced through the use of photosensitizers. Mechanistic aspects of the photopolymerization studies are discussed.  
 IT 121225-97-6P, PC 1000  
 (PC 1000; long-wavelength-absorbing dialkylphenacylsulfonium salt photoinitiator for cationic polymerization)  
 RN 121225-97-6 HCAPLUS  
 CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]-, homopolymer (CA INDEX NAME)  
 CM 1  
 CRN 18724-32-8  
 CMF C20 H38 O3 S12



CC 35-3 (Chemistry of Synthetic High Polymers)  
 ST dialkylphenacylsulfonium salt cationic polymerization photoinitiator  
 IT Polymerization catalysts  
 (cationic, photochem.; long-wavelength-absorbing

dialkylphenacylsulfonium salt photoinitiator for cationic polymerization)

IT Polysiloxanes, preparation  
Polysiloxanes, preparation  
(epoxy; long-wavelength-absorbing dialkylphenacylsulfonium salt photoinitiator for cationic polymerization)

IT Epoxy resins, preparation  
(long-wavelength-absorbing dialkylphenacylsulfonium salt photoinitiator for cationic polymerization)

IT Epoxy resins, preparation  
Epoxy resins, preparation  
(polysiloxane-; long-wavelength-absorbing dialkylphenacylsulfonium salt photoinitiator for cationic polymerization)

IT 121225-97-6P, PC 1000  
(PC 1000; long-wavelength-absorbing dialkylphenacylsulfonium salt photoinitiator for cationic polymerization)

IT 2632-13-5 3698-89-3 7396-21-6, 1-Acetylanthracene  
(in catalyst preparation; long-wavelength-absorbing dialkylphenacylsulfonium salt photoinitiator for cationic polymerization)

IT 52643-81-9P  
(in catalyst preparation; long-wavelength-absorbing dialkylphenacylsulfonium salt photoinitiator for cationic polymerization)

IT 259669-57-3P 272450-06-3P 272450-08-5P 272450-10-9P  
272450-12-1P 272450-14-3P  
(long-wavelength-absorbing dialkylphenacylsulfonium salt photoinitiator for cationic polymerization)

IT 16925-25-0, Sodium hexafluoroantimonate  
(long-wavelength-absorbing dialkylphenacylsulfonium salt photoinitiator for cationic polymerization)

IT 25085-98-7P, ERL 4221E 245117-57-1P  
(long-wavelength-absorbing dialkylphenacylsulfonium salt photoinitiator for cationic polymerization)

OS.CITING REF COUNT: 17 THERE ARE 17 CAPLUS RECORDS THAT CITE THIS RECORD (17 CITINGS)

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 16 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1999:261295 HCAPLUS Full-text

DOCUMENT NUMBER: 131:45180

TITLE: Use of Cationic Aerosol  
Photopolymerization To Form Silicone  
Microbeads in the Presence of Molecular Templates.  
[Erratum to document cited in CA124:261877]  
Vorderbruggen, Mark A.; Crivello, James; Wu,  
Kenneth; Breneman, Curt M.  
Dep. Chem., Rensselaer Polytechnic Institute,  
Troy, NY, 12180, USA

CORPORATE SOURCE: Chemistry of Materials (1999), 11(5),  
1398

SOURCE: CODEN: CMATEX; ISSN: 0897-4756

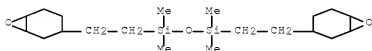
PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 29 Apr 1999

- AB The author list for this publication (Chemical Mater. 1996, 8, 1106) should be amended to read: Mark A. Vorderbruggen, James Crivello, Kenneth Wu, and Curt M. Breneman.
- IT 121225-97-6P  
(cationic aerosol photopolymer. to form epoxy-silicone microbeads in presence of mol. templates (Erratum))
- RN 121225-97-6 HCAPLUS
- CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]-, homopolymer (CA INDEX NAME)
- CM 1
- CRN 18724-32-8
- CMF C20 H38 O3 Si2



- CC 35-5 (Chemistry of Synthetic High Polymers)
- ST erratum cationic aerosol photopolymer silicone microbead; cationic aerosol photopolymer silicone microbead erratum; aerosol photopolymer silicone microbead template erratum
- IT Polymerization catalysts  
(cationic, photoinitiator; cationic aerosol photopolymer. to form epoxy-silicone microbeads in presence of mol. templates (Erratum))
- IT Polysiloxanes, preparation  
(epoxy, cationic aerosol photopolymer. to form epoxy-silicone microbeads in presence of mol. templates (Erratum))
- IT Polymerization  
(photopolymer., template; cationic aerosol photopolymer. to form epoxy-silicone microbeads in presence of mol. templates (Erratum))
- IT Epoxy resins, preparation  
(siloxane-, cationic aerosol photopolymer. to form epoxy-silicone microbeads in presence of mol. templates (Erratum))
- IT 67-51-6, 3,5-Dimethylpyrazole 67-56-1, Methanol, miscellaneous 68-12-2, miscellaneous 71-43-2, Benzene, miscellaneous 75-05-8, Acetonitrile, miscellaneous 75-98-9, Trimethylacetic acid 99-35-4, Trinitrobenzene 110-86-1, Pyridine, miscellaneous 112-38-9, 10-Undecenoic acid 140-29-4, Benzylisocyanide 141-78-6, Acetic acid ethyl ester, miscellaneous 2043-61-0, Cyclohexanecarboxaldehyde 2129-89-7, Diphenylmethylphosphine oxide  
(cationic aerosol photopolymer. to form epoxy-silicone microbeads in presence of mol. templates (Erratum))
- IT 51666-39-8  
(cationic aerosol photopolymer. to form epoxy-silicone microbeads in presence of mol. templates (Erratum))
- IT 121225-97-6P  
(cationic aerosol photopolymer. to form epoxy-silicone microbeads in presence of mol. templates (Erratum))
- IT 58-08-2, miscellaneous  
(functionality in relation to; cationic aerosol photopolymer. to form epoxy-silicone microbeads in presence of mol. templates



(Erratum))  
 IT 121239-75-6, (4-(Octyloxy)phenyl)phenyliodonium hexafluoroantimonate  
 (photoinitiator; cationic aerosol  
 photopolymer. to form epoxy-silicone microbeads in presence  
 of mol. templates (Erratum))  
 IT 115-37-7, Thebaine  
 (template; cationic aerosol photopolymer. to form  
 epoxy-silicone microbeads in presence of mol. templates (Erratum))  
 OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS  
 RECORD (1 CITINGS)

L27 ANSWER 17 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1998:806334 HCAPLUS [Full-text](#)  
 DOCUMENT NUMBER: 130:169541  
 TITLE: UV-EB curing of epoxy silicone  
 coatings  
 AUTHOR(S): Priou, C.; Frances, J. M.; Kerr, S.; Richard, J.  
 CORPORATE SOURCE: Italy  
 SOURCE: Pitture e Vernici Europe (1998), 74(17),  
 19-22, 24-27  
 CODEN: PVEUEO  
 PUBLISHER: G.B.P. Communications  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

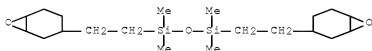
ED Entered STN: 24 Dec 1998

AB The high solubility and reactivity of the cationic photoinitiator Rhodorsil  
 Photoinitiator 2074 ensures the best irradiation crosslinking of various  
 epoxy-functionalized silicone resins. Only the cationic part of the  
 photoinitiator is involved in the rate of acid release resulting from  
 photodegradation on exposure to UV light or an electron beam. Epoxy silicone  
 release coatings crosslinked by UV or electron beam irradiation resulted in  
 very good performance, particularly the stability of release forces after  
 accelerated aging. However, slightly less stability was observed in the case  
 of UV-initiated curing. The properties of the reactive diluent S200 are  
 presented and use of the diluent as an additive for inks and varnish is  
 discussed.

IT 18724-32-8, 1,3-Bis[2-(3,4-epoxycyclohexyl)ethyl]-1,1,3,3-  
 tetramethyldisiloxane  
 (reactive diluent, S 200; for use in UV-curable  
 inks and varnishes)

RN 18724-32-8 HCAPLUS

CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(7-oxabicyclo[4.1.0]hept-3-  
 yl)ethyl]- (CA INDEX NAME)



CC 42-3 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 38  
 ST photoinitiator radiation crosslinking epoxy  
 silicone coating  
 IT Crosslinking catalysts  
 (UV and electron beam curing of epoxy  
 silicone coatings using diphenyliodonium

- tetrakis(pentafluorophenyl)borate photoinitiator)
- IT Release coatings  
(epoxy silicones; UV and electron beam curing  
of epoxy silicone coatings using diphenyliodonium  
tetrakis(pentafluorophenyl)borate photoinitiator)
- IT Polysiloxanes, uses  
Polysiloxanes, uses  
(epoxy, release coatings; UV and electron beam  
curing of epoxy silicone coatings using diphenyliodonium  
tetrakis(pentafluorophenyl)borate photoinitiator)
- IT Crosslinking  
(photochem.; UV and electron beam  
curing of epoxy silicone coatings using diphenyliodonium  
tetrakis(pentafluorophenyl)borate photoinitiator)
- IT Inks  
(photocurable; reactive epoxide diluent for use in  
UV-curable inks and varnishes)
- IT Epoxy resins, uses  
Epoxy resins, uses  
(polysiloxane-, release coatings; UV and electron  
beam curing of epoxy silicone coatings using  
diphenyliodonium tetrakis(pentafluorophenyl)borate photoinitiator)
- IT Crosslinking  
(radiochem.; UV and electron beam  
curing of epoxy silicone coatings using diphenyliodonium  
tetrakis(pentafluorophenyl)borate photoinitiator)
- IT Varnishes  
(reactive epoxide diluent for use in UV-curable  
inks and varnishes)
- IT 203126-71-0, Rhodorsil Photoinitiator 2074  
(photoinitiator; UV and electron beam curing of  
epoxy silicone coatings using diphenyliodonium  
tetrakis(pentafluorophenyl)borate photoinitiator)
- IT 18724-32-8, 1,3-Bis[2-(3,4-epoxycyclohexyl)ethyl]-1,1,3,3-  
tetramethyldisiloxane  
(reactive diluent, S 200; for use in UV-curable  
inks and varnishes)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
RE FORMAT

L27 ANSWER 18 OF 25 HCAPLUS COPYRIGHT 2009 ACS ON STN

ACCESSION NUMBER: 1998:675139 HCAPLUS Full-text

DOCUMENT NUMBER: 129:277409

ORIGINAL REFERENCE NO.: 129:56539a,56542a

TITLE: Composition photocurable by a cationic  
and/or a radical process, comprising an organic  
matrix base, a diluent, and a photoinitiator  
Breunig, Stefan; Frances, Jean-Marc  
Rhodia Chimie, Fr.  
SOURCE: PCT Int. Appl., 66 pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9843134	A1	19981001	WO 1998-FR566	19980320

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W: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, HU, IL, IS,  
 JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL,  
 RO, SG, SI, SK, TR, TT, UA, US, UZ, VN, YU, AM, AZ, BY, KG,  
 KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES,  
 FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,  
 CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

FR 2761368 A1 19981002 FR 1997-3916 19970325  
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FR 2761368 B1 20051021  
 AU 9870496 A 19981020 AU 1998-70496 19980320  
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EP 970405 A1 20000112 EP 1998-917196 19980320  
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R: DE, FR, GB  
 US 20020035199 A1 20020321 US 2001-922614 20010806  
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US 20030225199 A1 20031204 US 2003-404694 20030401  
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US 6864311 B2 20050308  
 PRIORITY APPLN. INFO.: FR 1997-3916 A 19970325  
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WO 1998-FR566 W 19980320  
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US 2000-381888 B1 20000215  
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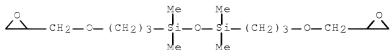
US 2001-922614 B1 20010806  
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ED Entered STN: 26 Oct 1998

AB The composition comprises (A) a polymerizable organic matrix containing epoxy resins, acrylates, alkenyl ethers, or polyols, (B) a nontoxic silicone diluent with viscosity  $\leq 200$  mPa-s at 25°, (C) a radical and/or cationic (onium salt) photoinitiator, and optionally (D) a light sensitizer, (E) pigments, and (F) other additives; provided that when A is a cycloaliph. epoxy resin, B has a metal concentration  $\leq 100$  ppm. Such compns. are translucent, free from metallic impurities, and capable of providing a photopolymerizable varnish with good ductility for leveling and surface coating. Thus, 100 parts of a composition comprising 95% (3,4-epoxycyclohexyl)methyl 3,4-epoxycyclohexanecarboxylate and 5% 1,3-bis[2-(3,4-epoxycyclohexyl)ethyl]-1,1,3,3-tetramethyldisiloxane (diluent) was mixed with 0.5 part Silwet L 7640 and 2.5 mmol/L photoinitiator [90% S(C6H4S+Ph2-4)2 2[-B(C6F5)4] + 10% 4-PhSC6H4S+Ph2 -B(C6F5)4], coated (5  $\mu$ m) on an Al panel, and exposed to UV radiation (1.1 J/m<sup>2</sup>), becoming 95% crosslinked in 245 s.

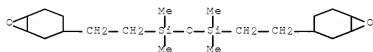
IT 126-80-7 18724-32-8,  
 1,3-Bis[2-(3,4-epoxycyclohexyl)ethyl]-1,1,3,3-tetramethyldisiloxane  
 18758-97-9 65842-29-7,  
 3-[2-(3,4-Epoxycyclohexyl)ethyl]-1,1,1,3,5,5,5-heptamethyltrisiloxane  
 (diluent; photocurable coatings containing siloxane reactive  
 diluents)

RN 126-80-7 HCAPLUS  
 CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[3-(2-oxiranylethoxy)propyl]-  
 (CA INDEX NAME)



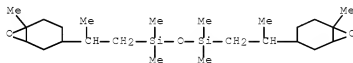
RN 18724-32-8 HCAPLUS

CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]- (CA INDEX NAME)



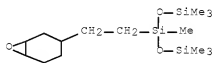
RN 18758-97-9 HCAPLUS

CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(6-methyl-7-oxabicyclo[4.1.0]hept-3-yl)propyl]- (CA INDEX NAME)



RN 65842-29-7 HCAPLUS

CN Trisiloxane, 1,1,1,3,3,5,5-heptomethyl-3-[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]- (CA INDEX NAME)



IC ICM G03F007-075

ICS C08G059-30

CC 42-3 (Coatings, Inks, and Related Products)

ST photocurable coating siloxane diluent; epoxy coating

sulfonium salt photoinitiator

IT Coating materials

Inks

(photocurable; photocurable coatings containing

siloxane reactive diluents)

IT Epoxy resins, uses

(photocured coatings containing siloxane reactive diluents)

IT 158521-03-0, Dimethylsilanediol-[2-(3,4-

epoxycyclohexyl)ethyl)methylsilanediol copolymer  
(cyclic oligomer, diluent; photocurable coatings containing siloxane reactive diluents)

IT 126-80-7 18547-93-8,  
1,3-Bis[3-(methacryloyloxy)propyl]-1,1,3,3-tetramethyldisiloxane  
18724-32-8, 1,3-Bis[2-(3,4-epoxycyclohexyl)ethyl]-1,1,3,3-  
tetramethyldisiloxane 18758-97-9 65842-29-7,  
3-[2-(3,4-Epoxycyclohexyl)ethyl]-1,1,1,3,5,5,5-heptamethyltrisiloxane  
80722-63-0 131334-81-1 174423-51-9 197984-58-0 213984-84-0  
(diluent; photocurable coatings containing siloxane reactive diluents)

IT 765-12-8, Triethylene glycol divinyl ether  
(matrix base, Rapidcure CHVE 3; photocurable coatings containing siloxane reactive diluents)

IT 1680-21-3, Triethylene glycol diacrylate 2386-87-0 3290-92-4  
3524-68-3, Pentaerythritol triacrylate 4687-94-9, Ebecryl 600  
13048-33-4, Hexamethylene diacrylate 15625-89-5, Trimethylolpropane triacrylate 17831-71-9, Tetraethylene glycol diacrylate  
19721-37-0, Thiodiethylene glycol diacrylate 28961-43-5  
42978-66-5, Tripropylene glycol diacrylate 54735-63-6 79586-49-5,  
Ebecryl 810 83996-66-1, Bis(3,4-epoxycyclohexyl) adipate  
(matrix base; photocurable coatings containing siloxane reactive diluents)

IT 183798-90-5P 213984-74-8P 213984-75-9P 213984-77-1P  
213984-78-2P 213984-81-7P  
(photocured coatings containing siloxane reactive diluents)

IT 7473-98-5 178233-72-2 203573-06-2 213984-72-6  
(photoinitiator; photocurable coatings containing siloxane reactive diluents)

OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 19 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1998:358251 HCAPLUS Full-text

DOCUMENT NUMBER: 129:97638

ORIGINAL REFERENCE NO.: 129:20087a,20090a

TITLE: ORMOCERs as inorganic-organic electrolytes  
for new solid state lithium batteries and  
supercapacitors

AUTHOR(S): Popall, M.; Andrei, M.; Kappel, J.; Kron, J.;  
Olma, K.; Olsowski, B.

CORPORATE SOURCE: Fraunhofer-Inst. Silicatforschung, Wurzburg,  
D-97082, Germany

SOURCE: Electrochimica Acta (1998), 43(10-11),  
1155-1161

CODEN: ELCAAV; ISSN: 0013-4686

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

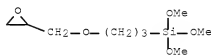
LANGUAGE: English

ED Entered STN: 13 Jun 1998

AB ORMOCERs (ORganically Modified CERamics) are inorg.-organic copolymers which are synthesized as matrix for Li-ion conduction. The inorg. oxidic backbone of these materials results from polycondensation of alkoxy compds. whereas the organic network is formed from reactive functional groups R' of alkoxy silanes of the type R'Si(OR)3, or by co-polymerizing reactive organic monomers with reactive functionalized alkoxy silanes. Depending on the reactive organic functionalities and their thermal and UV-initiated organic crosslinking

reactions the materials were adapted to the needs of battery and supercapacitor manufacturing. For ionic conductivity polyethers with different chain lengths and functionalized (e.g. epoxy) termination sites were synthesized and attached to organically functionalized oxidic oligomers. Conductivities of up to  $10^{-4} \Omega^{-1} \text{ cm}^{-1}$  at room temperature were achieved without plasticizer. The electrolytes form an amorphous network with configuration temps. (according to Vogel-Tammann-Fulcher) close to  $-80^\circ$ , several degrees below the transformation temperature (measured by DSC) in agreement with conventional configuration theory. The activation energies correlate favorably with results for good polymer electrolytes.

- IT 2530-83-8, 3-Glycidyloxypropyltrimethoxysilane  
(organically modified ceramics as inorg.-organic electrolytes for new solid state lithium batteries and supercapacitors)
- RN 2530-83-8 HCAPLUS
- CN Oxirane, 2-[[3-(trimethoxysilyl)propoxy]methyl]- (CA INDEX NAME)



- CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)  
Section cross-reference(s): 38, 57, 76
- ST battery supercapacitor electrolyte organically modified ceramic
- IT Polyoxalkylenes, preparation  
(electrolyte containing; organically modified ceramics as inorg.-organic electrolytes for new solid state lithium batteries and supercapacitors)
- IT Polysiloxanes, preparation  
Polysiloxanes, preparation  
(epoxy; organically modified ceramics as inorg.-organic electrolytes for new solid state lithium batteries and supercapacitors)
- IT Secondary batteries  
(lithium; organically modified ceramics as inorg.-organic electrolytes for new solid state lithium batteries and supercapacitors)
- IT Battery electrolytes  
Ceramics  
Electric conductivity  
Hydrolysis  
Ionic conductivity  
(organically modified ceramics as inorg.-organic electrolytes for new solid state lithium batteries and supercapacitors)
- IT Epoxy resins, preparation  
Epoxy resins, preparation  
(polysiloxane-; organically modified ceramics as inorg.-organic electrolytes for new solid state lithium batteries and supercapacitors)
- IT Capacitors  
(super-; organically modified ceramics as inorg.-organic electrolytes for new solid state lithium batteries and supercapacitors)
- IT 7791-03-9P, Lithium perchlorate 25322-68-3P, Peo

(electrolyte containing; organically modified ceramics as inorg.-organic electrolytes for new solid state lithium batteries and supercapacitors)

IT 12125-01-8, Ammonium fluoride  
(organically modified ceramics as inorg.-organic electrolytes for new solid state lithium batteries and supercapacitors)

IT 1871-21-2, Chlorotriethylsilane 2530-83-8,  
3-Glycidyloxypropyltrimethoxysilane  
(organically modified ceramics as inorg.-organic electrolytes for new solid state lithium batteries and supercapacitors)

IT 56325-93-0P, 3-Glycidyloxypropyltrimethoxysilane homopolymer  
(organically modified ceramics as inorg.-organic electrolytes for new solid state lithium batteries and supercapacitors)

OS.CITING REF COUNT: 58 THERE ARE 58 CAPLUS RECORDS THAT CITE THIS RECORD (58 CITINGS)

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 20 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1998:219840 HCAPLUS Full-text

DOCUMENT NUMBER: 128:231091

ORIGINAL REFERENCE NO.: 128:45769a,45772a

TITLE: Ionizing radiation-curable epoxy compositions containing onium salt photoinitiators and high-speed crosslinking thereof

INVENTOR(S): Walton, Thomas C.; Crivello, James V.

PATENT ASSIGNEE(S): Aeroplas Corporation International, USA; Walton, Thomas C.; Crivello, James V.

SOURCE: PCT Int. Appl., 21 pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9814485	A1	19980409	WO 1997-US17702	19970930
<--				
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT, UA, UG, US, UZ, VN				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2272123	A1	19980409	CA 1997-2272123	19970930
<--				
AU 9746631	A	19980424	AU 1997-46631	19970930
<--				
EP 932628	A1	19990804	EP 1997-945421	19970930
<--				
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRIORITY APPLN. INFO.:			US 1996-724284	A 19961001
			<--	
			WO 1997-US17702	W 19970930
			<--	

ED Entered STN: 18 Apr 1998

AB Title composition comprises a low reactivity epoxy resin and 0.5-10 weight% onium salt is exposed to ionizing radiation and cured by cationic polymerization to produce products having high strength, heat resistance, and storage modulus. Thus, a mixture of Epon 862 50, DEN 431 (epoxy novolak) 50, and [4-(decyloxy)phenyl]phenyliodonium hexafluoroantimonate 1 part was irradiated with 75 kGy electron beam, giving a sample having storage modulus  $1.0 \times 10^9$  Pa at room temperature and  $T_g$  200°.

IT 121225-97-6P, Aeroplas IC 11  
(ionizing radiation-curable epoxy compns.  
containing onium salt photoinitiators and high-speed crosslinking thereof)

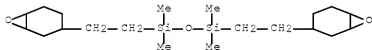
RN 121225-97-6 HCAPLUS

CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]-, homopolymer (CA INDEX NAME)

CM 1

CRN 18724-32-8

CMF C20 H38 O3 Si2



IC ICM C08F002-46

CC 37-3 (Plastics Manufacture and Processing)

ST electron beam curing epoxy onium photoinitiator;  
phenyliodonium hexafluoroantimonate photoinitiator epoxy  
radiation curing; novolak epoxy radiation  
curing onium photoinitiator

IT Sulfonium compounds  
Sulfonium compounds  
(arene; ionizing radiation-curable epoxy  
compns. containing onium salt photoinitiators and high-speed  
crosslinking thereof)

IT Epoxy resins, uses  
(bisphenol F-based; ionizing radiation-curable  
epoxy compns. containing onium salt photoinitiators and high-speed  
crosslinking thereof)

IT Polysiloxanes, uses  
Polysiloxanes, uses  
(epoxy; ionizing radiation-curable epoxy  
compns. containing onium salt photoinitiators and high-speed  
crosslinking thereof)

IT Onium compounds  
(iodonium, aryl; ionizing radiation-curable  
epoxy compns. containing onium salt photoinitiators and high-speed  
crosslinking thereof)

IT Aromatic compounds  
(iodonium; ionizing radiation-curable epoxy  
compns. containing onium salt photoinitiators and high-speed  
crosslinking thereof)

IT Epoxy resins, uses  
(ionizing radiation-curable epoxy compns.



containing onium salt photoinitiators and high-speed crosslinking thereof)

IT Epoxy resins, uses  
(phenolic, novolak; ionizing radiation-curable epoxy compns. containing onium salt photoinitiators and high-speed crosslinking thereof)

IT Epoxy resins, uses  
Epoxy resins, uses  
(polysiloxane-; ionizing radiation-curable epoxy compns. containing onium salt photoinitiators and high-speed crosslinking thereof)

IT Crosslinking  
Crosslinking catalysts  
(radiochem.; ionizing radiation-curable epoxy compns. containing onium salt photoinitiators and high-speed crosslinking thereof)

IT Aromatic compounds  
Aromatic compounds  
(sulfonium; ionizing radiation-curable epoxy compns. containing onium salt photoinitiators and high-speed crosslinking thereof)

IT 71449-78-0, Diphenyl[4-(phenylthio)phenyl]sulfonium hexafluoroantimonate 125740-41-2, (4-Decyloxyphenyl)phenyliodonium hexafluoroantimonate  
(ionizing radiation-curable epoxy compns. containing onium salt photoinitiators and high-speed crosslinking thereof)

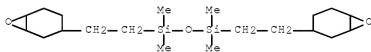
IT 25085-98-7P 25085-99-8P, Bisphenol A diglycidyl ether homopolymer  
65581-98-8P, Bisphenol F diglycidyl ether homopolymer  
121225-97-6P, Aeroplas IC 11 204588-03-4P 204588-05-6P  
204643-28-7P  
(ionizing radiation-curable epoxy compns. containing onium salt photoinitiators and high-speed crosslinking thereof)

IT 96141-20-7, Epon 862  
(ionizing radiation-curable epoxy compns. containing onium salt photoinitiators and high-speed crosslinking thereof)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 21 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 1996:248500 HCAPLUS Full-text  
DOCUMENT NUMBER: 124:261877  
ORIGINAL REFERENCE NO.: 124:48545a, 48548a  
TITLE: Use of Cationic Aerosol  
Photopolymerization To Form Silicone  
Microbeads in the Presence of Molecular Templates  
Vorderbruggen, Mark A.; Wu, Kenneth; Breneman, Curt M.  
AUTHOR(S):  
CORPORATE SOURCE: Department of Chemistry, Rensselaer Polytechnic  
Institute, Troy, NY, 12180, USA  
SOURCE: Chemistry of Materials (1996), 8(5),  
1106-11  
CODEN: CMATEX; ISSN: 0897-4756  
PUBLISHER: American Chemical Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
ED Entered STN: 27 Apr 1996

- AB A new methodol. for template-directed polymerization is described which is suitable for easy microbead formation. Cationic polymerization of a bis-epoxy silicone monomer by a diaryliodonium salt photoinitiator occurred fast enough to polymerize the droplets of an aerosol spray of the monomer, photoinitiator, and template in flight. Sym. microbeads averaging 31  $\mu\text{m}$  in diameter were produced and captured by electrostatic precipitation. The effect of numerous functional groups on the rate of polymerization is discussed. Nitrogenous bases were detrimental to polymer bead formation, as were certain carboxylic acids. Beads imprinted with morphine analog thebaine displayed stronger mol. recognition properties for thebaine than did nonimprinted beads. However, both thebaine-templated and nonimprinted beads retained similar amts. of the thebaine derivative 17,18-bis(methoxycarbonyl)-6,14-ethenocodeine Me ether.
- IT 121225-97-6P  
(cationic aerosol photopolymer. to form epoxy-silicone microbeads in presence of mol. templates)
- RN 121225-97-6 HCAPLUS
- CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]-, homopolymer (CA INDEX NAME)
- CM 1
- CRN 18724-32-8
- CMF C20 H38 O3 S12



- CC 35-5 (Chemistry of Synthetic High Polymers)
- ST cationic aerosol photopolymer silicone microbead template
- IT Polymerization catalysts  
(cationic, photoinitiator; cationic aerosol photopolymer. to form epoxy-silicone microbeads in presence of mol. templates)
- IT Siloxanes and Silicones, preparation  
(epoxy, cationic aerosol photopolymer. to form epoxy-silicone microbeads in presence of mol. templates)
- IT Polymerization  
(photochem., template; cationic aerosol photopolymer. to form epoxy-silicone microbeads in presence of mol. templates)
- IT Epoxy resins, preparation  
(siloxane-, cationic aerosol photopolymer. to form epoxy-silicone microbeads in presence of mol. templates)
- IT 121225-97-6P  
(cationic aerosol photopolymer. to form epoxy-silicone microbeads in presence of mol. templates)
- IT 58-08-2, Caffeine, miscellaneous 67-51-6, 3,5-Dimethylpyrazole 67-56-1, Methanol, miscellaneous 68-12-2, Dimethylformamide, miscellaneous 71-43-2, Benzene, miscellaneous 75-05-8, Acetonitrile, miscellaneous 75-98-9, Trimethylacetic acid 99-35-4, Trinitrobenzene 110-86-1, Pyridine, miscellaneous 112-38-9, 10-Undecenoic acid 140-29-4, Benzylnitrile 141-78-6, Ethyl acetate, miscellaneous 2043-61-0, Cyclohexanecarboxaldehyde 2129-89-7, Diphenylmethylphosphine oxide

(functionality in relation to; cationic aerosol photopolymerization to form epoxy-silicone microbeads in presence of mol. templates)

IT 121239-75-6, (4-(Octyloxy)phenyl)phenyliodonium hexafluoroantimonate (photoinitiator; cationic aerosol photopolymerization to form epoxy-silicone microbeads in presence of mol. templates)

IT 115-37-7, Thebaine 51666-39-8 (template; cationic aerosol photopolymerization to form epoxy-silicone microbeads in presence of mol. templates)

OS.CITING REF COUNT: 21 THERE ARE 21 CAPLUS RECORDS THAT CITE THIS RECORD (21 CITINGS)

L27 ANSWER 22 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1996:233151 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 124:290969

ORIGINAL REFERENCE NO.: 124:53969a,53972a

TITLE: Synthesis, reactivity, and properties of new diaryliodonium salts as photoinitiators for the cationic polymerization of epoxy silicones

AUTHOR(S): Castellanos, F.; Fouassier, J. P.; Priou, C.; Cavezzan, J.

CORPORATE SOURCE: Laboratoire Photochimie Generale Unite Associee C.N.R.S., Ecole Nationale Supérieure Chimie, Mulhouse, 68093, Fr.

SOURCE: Journal of Applied Polymer Science (1996), 60(5), 705-13

CODEN: JAPNAB; ISSN: 0021-8995

PUBLISHER: Wiley

DOCUMENT TYPE: Journal

LANGUAGE: English

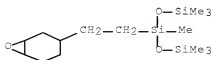
ED Entered STN: 20 Apr 1996

AB Diaryliodonium tetrakis(pentafluorophenyl) borate salts generate a higher reactivity than any other known diaryliodonium salt. The photochemical properties of diaryliodonium tetrakis(pentafluorophenyl)borate salts were compared to those of the diaryliodonium hexafluoroantimonate salt. These new salts are the most reactive photoinitiators in this family. In addition, diaryliodonium tetrakis(pentafluorophenyl) borate salts are soluble in low polarity media, such as epoxy silicone oils, which are rich in epoxy groups and insensitive to humidity. These salts have the advantage not to contain a heavy metal (such as antimony). The new properties generated by the use of the tetrakis(pentafluorophenyl) borate anion make the future of the cationic photopolymerization promising.

IT 65842-29-7 (preparation, reactivity, and properties of diphenyliodonium tetrakis(pentafluorophenyl)borate as photoinitiators for cationic polymerization of epoxy silicones)

RN 65842-29-7 HCAPLUS

CN Trisiloxane, 1,1,1,3,5,5,5-heptamethyl-3-[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]- (CA INDEX NAME)



CC 37-3 (Plastics Manufacture and Processing)

ST Iodonium photoinitiator cationic polymn epoxy  
silicone; fluorophenylborate photoinitiator cationic  
polymn epoxy silicone; catalyst photopolymn epoxy silicone  
iodonium borate

IT Siloxanes and Silicones, properties  
(epoxy, preparation, reactivity, and properties of diphenyliodonium  
tetrakis(pentafluorophenyl)borate as photoinitiators for  
cationic polymerization of epoxy silicones)

IT Kinetics of polymerization  
Polymerization catalysts  
(photochem., preparation, reactivity, and properties of diphenyliodonium  
tetrakis(pentafluorophenyl)borate as photoinitiators for  
cationic polymerization of epoxy silicones)

IT Epoxy resins, properties  
(siloxane-, preparation, reactivity, and properties of diphenyliodonium  
tetrakis(pentafluorophenyl)borate as photoinitiators for  
cationic polymerization of epoxy silicones)

IT 153606-14-5P, Diphenyliodonium tetrakis(pentafluorophenyl)borate  
(preparation, reactivity, and properties of diphenyliodonium  
tetrakis(pentafluorophenyl)borate as photoinitiators for  
cationic polymerization of epoxy silicones)

IT 25085-98-7, CY 179 65842-29-7  
(preparation, reactivity, and properties of diphenyliodonium  
tetrakis(pentafluorophenyl)borate as photoinitiators for  
cationic polymerization of epoxy silicones)

OS.CITING REF COUNT: 48 THERE ARE 48 CAPLUS RECORDS THAT CITE THIS  
RECORD (48 CITINGS)

L27 ANSWER 23 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1995:689765 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 123:230037

ORIGINAL REFERENCE NO.: 123:41089a,41092a

TITLE: Electron-beam polymerization  
of epoxy monomers and oligomers for composite  
applications

AUTHOR(S): Crivello, J. V.; Malik, R.; Walton, Thomas  
CORPORATE SOURCE: Department of Chemistry, Rensselaer Polytechnic  
Institute, Troy, NY, 12180, USA

SOURCE: Polymer Preprints (American Chemical Society,  
Division of Polymer Chemistry) (1994),  
35(2), 890-1

CODEN: ACPPAY; ISSN: 0032-3934

PUBLISHER: American Chemical Society, Division of Polymer  
Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 20 Jul 1995

AB The feasibility of using low dose electron beam radiation to cure fiber-  
reinforced epoxy-functional silicone resin composite was confirmed.

IT 121225-97-6P  
(electron-beam curing of epoxy monomers and  
oligomers for composite applications)

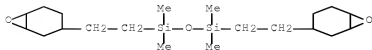
RN 121225-97-6 HCAPLUS

CN Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[2-(7-oxabicyclo[4.1.0]hept-3-  
yl)ethyl]-, homopolymer (CA INDEX NAME)

CM 1

CRN 18724-32-8

CMF C20 H38 O3 Si2



CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 38

ST electron beam curing epoxy siloxane composite;  
 fiber reinforced epoxy siloxane composite crosslinking

IT Siloxanes and Silicones, preparation  
 (epoxy, electron-beam curing of epoxy monomers  
 and oligomers for composite applications)

IT Polyolefin fibers  
 (ethylene, electron-beam curing of epoxy  
 monomers and oligomers for composite applications)

IT Carbon fibers, uses  
 (graphite, electron-beam curing of epoxy  
 monomers and oligomers for composite applications)

IT Crosslinking  
 (radiochem., electron beam; electron-  
 beam curing of epoxy monomers and oligomers for composite  
 applications)

IT Epoxy resins, preparation  
 (siloxane-, electron-beam curing of epoxy  
 monomers and oligomers for composite applications)

IT 121225-97-6P 151110-82-6P 168909-31-7P  
 (electron-beam curing of epoxy monomers and  
 oligomers for composite applications)

IT 9002-88-4, Polyethylene  
 (fibers; electron-beam curing of epoxy monomers  
 and oligomers for composite applications)

OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS  
 RECORD (3 CITINGS)

L27 ANSWER 24 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1993:639338 HCAPLUS Full-text

DOCUMENT NUMBER: 119:239338

ORIGINAL REFERENCE NO.: 119:42409a,42412a

TITLE: Crosslinked polyethylene glycol and its  
 derivatives as fast ion conductors

INVENTOR(S): Lisisimide, John; Du, Xia

PATENT ASSIGNEE(S): Chengdu University of Science and Technology,  
 Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 13  
 pp.  
 CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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CN 1063112	A	19920729	CN 1991-107117	19910112

PRIORITY APPLN. INFO.:

CN 1991-107117

19910112

ED Entered STN: 27 Nov 1993

AB Crosslinked polyethylene glycol and its derivs. are fast ion conductors and are prepared by heating a composition comprising polyethylene glycol or its derivative (mol. weight 200-10,000) 50-95, a crosslinking agent (i.e., an isocyanate or an epoxide) 1-50, an auxiliary crosslinking agent (i.e., a glycidic ether or cyanuric acid) 0-30, an alkaline metal salt (i.e., LiClO<sub>4</sub>, LiCF<sub>3</sub>SO<sub>3</sub>, or KCF<sub>3</sub>SO<sub>3</sub>) 5-60, a additive (i.e., propylene carbonate or DMF) 10-150, and a Pt catalyst 0-10 parts at 65-85° for 24 h in a N atmospheric. The fast ion conductors can be made into thin films (100μ) for use in high-energy-d. rechargeable batteries.

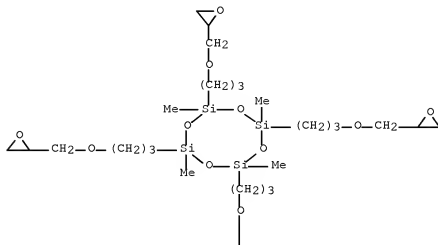
IT 60665-85-2

(polyethylene glycol and its derivs. crosslinked by, as fast ion conductors)

RN 60665-85-2 HCAPLUS

CN Cyclotetrasiloxane, 2,4,6,8-tetramethyl-2,4,6,8-tetrakis[3-(2-oxiranylmethoxy)propyl]- (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



IC ICM C08J003-24

ICS C08J005-18; C08G065-34; H01M006-18

CC 76-2 (Electric Phenomena)

IT 39394-47-3, Desmodur R 60665-85-2 124219-73-4

151067-07-1

(polyethylene glycol and its derivs. crosslinked by, as fast ion conductors)

L27 ANSWER 25 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1990:562586 HCAPLUS Full-text

DOCUMENT NUMBER: 113:162586

ORIGINAL REFERENCE NO.: 113:27451a, 27454a

TITLE: Presensitized lithographic plates comprising a photosensitive layer containing coupling agents and an electrolytically coarsened support

INVENTOR(S): Matsubara, Shinichi; Uehara, Masabumi; Fumya, Shinichi; Katahashi, Eriko

PATENT ASSIGNEE(S): Konica Co., Japan; Mitsubishi Kasei Corp.

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02004259	A	19900109	JP 1988-152719	19880621
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PRIORITY APPLN. INFO.:			JP 1988-152719	19880621
			<--	

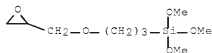
ED Entered STN: 27 Oct 1990

AB The title plates are prepared by forming a photosensitive layer containing silane coupling agents and/or Ti coupling agents on a support coarsened electrolytically using HNO<sub>3</sub> or HNO<sub>3</sub>-containing electrolytic solution containing coarsened. The neg.-working presensitized plates exhibit good printing durability. Thus, a degreased Al plate was electrolytically etched in a 1% HNO<sub>3</sub> solution, neutralized, washed, and subjected to anodic oxidation and then to sealing to give a support. The support was coated with a composition containing (1) a diazo resin obtained from p-diazodiphenylammonium sulfate, paraformaldehyde, and NH<sub>4</sub>PF<sub>6</sub> (2) p-hydroxyphenyl methacrylamide-acrylonitrile-Et acrylate-methacrylic acid copolymer, and (3) vinyltriacetoxysilane to give a presensitized plate producing high quality prints.

IT 2530-83-8, 3-Glycidoxypropyltrimethoxysilane  
(coupling agent, photosensitive layer of electrophotog.  
lithog. plate containing)

RN 2530-83-8 HCAPLUS

CN Oxirane, 2-[[3-(trimethoxysilyl)propoxy]methyl]- (CA INDEX NAME)



IC ICM G03F007-075

ICS B41N001-14; G03F007-00

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

- ST presensitized lithog plate coarsening support; electrolytic coarsening support presensitized plate; silane coupling agent lithog plate; titanium coupling agent lithog plate
- IT Coupling agents  
(titanium- or silane-containing, photosensitive layer of electrophotog. lithog. plate containing)
- IT Lithographic plates  
(presensitized, containing photosensitive layer with silane or titanium coupling agent)
- IT 2530-83-8, 3-Glycidoxypropyltrimethoxysilane 2530-87-2, 3-Chloropropyltrimethoxysilane 2768-02-7, Vinyltrimethoxysilane 4130-08-9, Vinyltriacetoxysilane 60319-98-4 61417-55-8 101320-56-3  
(coupling agent, photosensitive layer of electrophotog. lithog. plate containing)
- IT 9070-36-4 77833-95-5, Acrylonitrile-ethylacrylate-p-hydroxyphenylmethacrylamide-methacrylic acid copolymer 122988-13-0, Acrylonitrile-ethyl acrylate-p-hydroxyphenylmethacrylamide-methacrylic acid-methyl acrylate copolymer 125766-04-3  
(photosensitive layer for electrophotog. lithog. plate containing)



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FILE 'HCAPLUS' ENTERED AT 08:13:35 ON 13 AUG 2009

L1 1 SEA SPE=ON ABB=ON PLU=ON US20070128522/PN  
SEL RN

FILE 'REGISTRY' ENTERED AT 08:14:17 ON 13 AUG 2009

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59487-34-2/BI OR 6140-87-0/BI OR 68156-12-7/BI OR 7439-89-6  
/BI OR 7439-96-5/BI OR 7440-02-0/BI OR 7440-22-4/BI OR  
7440-48-4/BI OR 7440-50-8/BI OR 7440-66-6/BI OR 7440-70-2/B  
I OR 7473-98-5/BI OR 7601-90-3/BI OR 76545-55-6/BI OR  
7697-37-2/BI OR 771489-70-4/BI OR 771499-61-7/BI OR  
77181-47-6/BI OR 7791-03-9/BI OR 82184-28-9/BI OR 82799-44-  
8/BI OR 83846-86-0/BI OR 84-51-5/BI OR 84-54-8/BI OR  
90076-65-6/BI OR 93-91-4/BI OR 94-02-0/BI OR 94-36-0/BI)  
L3 0 SEA SPE=ON ABB=ON PLU=ON L2 AND SI/ELS  
L4 853672 SEA SPE=ON ABB=ON PLU=ON (SI(L)C(L)O)/ELS  
L5 431569 SEA SPE=ON ABB=ON PLU=ON EPOX?/CNS  
L6 7715 SEA SPE=ON ABB=ON PLU=ON L4 AND L5  
L7 2179 SEA SPE=ON ABB=ON PLU=ON L6 AND 2-100/SI

FILE 'HCAPLUS' ENTERED AT 08:44:44 ON 13 AUG 2009

L8 1365 SEA SPE=ON ABB=ON PLU=ON L7  
L9 2 SEA SPE=ON ABB=ON PLU=ON L8 AND BATTER?  
L10 QUE SPE=ON ABB=ON PLU=ON PHOTORX## OR PHOTOREACT? OR  
PHOTOSENS? OR PHOTOPOLYM? OR PHOTOCUR? OR PHOTOHARDEN? OR  
PHOTOCROSS? OR PHOTOCAT?  
L11 QUE SPE=ON ABB=ON PLU=ON (PHOTO OR LIGHT OR PHOTOLY? OR  
ULTRAVIOLET? OR ULTRA (W) VIOLET? OR UV# OR SUV OR LUV OR  
RADIA? OR IRRADIA? OR EMANAT? OR EMIT? OR EMISS? OR  
LASER?) (2A) (RX# OR RXN# OR REACT? OR SENSITI? OR POLYM?  
OR CURE# OR CURING# OR CURAB? OR CROSS(W)LINK? OR CROSSLINK  
? OR CAT# OR CATALY?)  
L12 156 SEA SPE=ON ABB=ON PLU=ON L8 AND (L10 OR L11)  
L13 0 SEA SPE=ON ABB=ON PLU=ON L12 AND ELECTROCHEM?/SC, SX  
L14 0 SEA SPE=ON ABB=ON PLU=ON L12 AND ELECTROLYT?  
L15 8 SEA SPE=ON ABB=ON PLU=ON L12 AND (ACTINIC IRRADIATION?  
OR ELECTRON BEAM?)

## 10/551,712

L16	90	SEA	SPE=ON	ABB=ON	PLU=ON	L12 AND (CATIONIC OR RADICAL?)
L17	19	SEA	SPE=ON	ABB=ON	PLU=ON	L12 AND (CATIONIC OR RADICAL?) (
						3A) (PHOTOINITIATOR? OR PHOTO INITIATOR?)
L18	28	SEA	SPE=ON	ABB=ON	PLU=ON	L9 OR L13 OR L14 OR L15 OR L17
L19	22	SEA	SPE=ON	ABB=ON	PLU=ON	L18 AND (1840-2003)/PRY,AY,PY
L20	1	SEA	SPE=ON	ABB=ON	PLU=ON	L8 AND ELECTROLYT?
L21	15771	SEA	SPE=ON	ABB=ON	PLU=ON	L6
L22	243	SEA	SPE=ON	ABB=ON	PLU=ON	L21 AND ELECTROLY?
L23	1	SEA	SPE=ON	ABB=ON	PLU=ON	L8 AND ELECTROLY?
L24	3	SEA	SPE=ON	ABB=ON	PLU=ON	L22 AND (L10 OR L11)
L25	4	SEA	SPE=ON	ABB=ON	PLU=ON	L23 OR L24
L26	3	SEA	SPE=ON	ABB=ON	PLU=ON	L25 AND (1840-2003)/PRY,AY,PY
L27	25	SEA	SPE=ON	ABB=ON	PLU=ON	L19 OR